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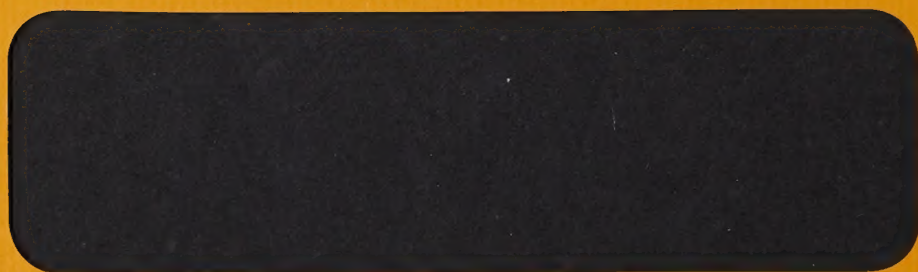
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CITY OF MILLBRAE
BASIC DATA AND BACKGROUND FOR
1974 GENERAL PLAN

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CITY OF MILLBRAE
BASIC DATA AND BACKGROUND FOR
1974 GENERAL PLAN

WILLIAMS & MOCINE : CITY AND REGIONAL PLANNING
1045 Sansome Street, San Francisco, California 94111

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CITY OF MILLBRAE
BASIC DATA AND BACKGROUND FOR
1974 GENERAL PLAN

APRIL, 1974

city planning

Millbrae

Geotechnical Consultants:

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CITY OF MILWAUKEE
BASIC DATA AND BACKGROUND FOR
1974 GENERAL PLAN

APRIL, 1974

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INTRODUCTION

During 1972 and 1973, Williams and Mocine engaged in a program of research and analysis leading to update and revision of Millbrae's General Plan. Numerous meetings were held with the Planning Commission, other officials and citizens in order to work out policies for the future guidance of the City.

The planning process in the 1970's has changed considerably from what it was in previous years. For one thing, it has become more oriented to policy. Additionally, State requirements now provide for substantial increases in the inputs, or elements, to be included in the General Plan.

In the case of Millbrae, the 10 elements considered resulted in such a volume of material, it was concluded that it should be separated into two basic documents. This report contains the background material leading up to the conclusions. An accompanying document contains, in much more succinct form, the major policies and recommendations of the General Plan.

BACKGROUND DATA

Population

Growth

The population of Millbrae grew from 15,873 in 1960 to 20,781 in 1970. This 30.9% growth rate is higher than that of the County as a whole (25.2%).

During the first years of the 1970's the County entered a period of extremely slow population growth. According to State Department of Finance estimates, the County's population increased by only 500 individuals between 1970 and 1971 - the smallest annual growth the County experienced since the early 1900's.

During the decade of the sixties the Mills Estate area, which roughly doubled its size to 3,150 persons, was the most rapidly growing area of Millbrae. Simultaneously, the Meadows area increased by 40% (3,100 people). Most of the remaining growth occurred between Broadway Avenue and the City limits to the northeast. These somewhat older neighborhoods grew by about 30%.

The racial breakdown of Millbrae's population did not change appreciably during the period 1960 - 1970. The 1960 Census revealed four individuals were "nonwhite". The 1970 Census indicated 15 Black people resided in Millbrae along with 316 "other". "Other" refers to individuals with ethnic background other than Black or Caucasian.

Age Characteristics

A comparison of Millbrae's population by age characteristic in 1960 and 1970 reveals significant changes. Millbrae experienced a large drop in its "under five" age group. Meanwhile, the "18-24" age category almost tripled, bringing it to 10% of the total population. Millbrae actually lost population in the "35-44" age grouping, and witnessed a very large increase in its "over 60" age group population. The County figures on age characteristics exhibited a similar pattern.

The decline of the 35-44 age grouping, both in the County and in Millbrae, reflects a "shortage" of this group in the national and State populations. Individuals in this age category represented offspring of the 1930's, a low birth rate period. The decline in those under five is attributed in part to the emerging practice of family limitation in the child-bearing age groups. The crude birth rate (births per 1,000 population) in San Mateo County declined from 22.2 in 1960 to 15.3 in 1970. Emerging family patterns, new birth control techniques, and other factors indicate that this downward trend is likely to continue. The decline in children under five indicates a further reduction in demand for elementary school facilities. However, the near tripling of the 18-24 age group attributable to the post-war baby boom, can be expected to fill college classrooms in the County for at least several more years.

TABLE 1
POPULATION INCREASE

	<u>Millbrae</u>		<u>San Mateo County</u>		
	<u>Population</u>	<u>Rate of Increase</u>	<u>Population</u>	<u>Rate of Increase</u>	<u>Millbrae % of County</u>
1960	15,873 ¹	-	444,387 ¹	-	3.7
1969	20,626 ²	-	550,400 ²	-	3.7
1970	20,781 ¹	30.9	556,234 ¹	25.2	3.7
1971	20,920 ³	.7	556,800 ³	.1	3.8
1972	21,250 ³	1.7	560,000 ⁴	5.7	3.8

¹ U.S. Census

² State Special Census

³ State Department of Finance

⁴ County Planning Department Estimates

TABLE 2
AGE COMPOSITION 1960 - 1970

Age Category	Millbrae					San Mateo County				
	1960		1970		Percent Change	1960		1970		Percent Change
	Number	Percent	Number	Percent		Number	Percent	Number	Percent	
Under 5	1,520	9.6	1,137	5.5	- 25.2	50,478	11.4	42,939	7.7	- 14.9
5 and 6	715	4.5	595	2.9	- 16.8	20,180	4.5	19,885	3.6	- 1.5
7 to 13	2,554	16.1	2,661	12.8	+ 4.2	65,103	14.7	73,759	13.3	+ 13.3
14 to 17	1,064	6.7	1,730	8.3	+ 62.6	25,665	5.8	41,724	7.5	+ 62.6
18 to 24	824	5.2	2,109	10.1	+155.9	29,973	6.7	61,193	11.0	+104.1
25 to 34	1,692	10.7	2,255	10.9	+ 33.3	60,473	13.6	78,521	14.1	+ 29.8
35 to 44	3,000	18.9	2,694	13.0	- 10.2	73,512	16.6	69,026	12.4	- 6.1
45 to 54	2,326	14.7	3,603	17.3	+ 54.9	54,983	12.4	75,161	13.5	+ 36.7
55 to 59	745	4.7	1,397	6.7	+ 87.5	19,219	4.3	29,080	5.2	+ 51.3
60 to 64	491	3.1	943	4.5	+ 92.1	14,847	3.3	22,367	4.0	+ 50.6
65 & over	942	5.9	1,657	8.0	+ 75.9	29,949	6.7	42,579	7.7	+ 42.2
TOTAL	15,873	100.1*	20,781	100.0	+ 30.9	44,387	100.0	556,234	100.0	+ 25.2

* due to rounding

Source: U.S. Census of population, 1960 and 1970.

Some further increase in those over 60 can be expected, and will probably reflect the increasing decline in birth rates. The part of Millbrae east of Broadway held both the highest proportion of the population "under five" and "over 65".

Household Income

By 1970, the distribution of households by income had shifted with a significantly higher percentage in the upper middle and high income group. The shift upward from the middle income brackets has been greater in Millbrae than in the County, even though the trends have been parallel. Approximately 2.7% of Millbrae's families were earning less than \$3,000, while 78.8% were earning \$10,000 or more. The gap between the low income and middle and high income groups in Millbrae has widened considerably. A similar trend, but not as extreme, has occurred in the County with over 4.4% of the households earning less than \$3,000 and 70.5% earning \$10,000 or more.

The middle and high income group in Millbrae grew faster than the low and moderate groups declined during the period. This is only explained by the obvious fact that new families moving into Millbrae are in the higher income group. Table 6 shows that effective buying income of Millbrae households has increased by over 26% from 1966 to 1970. This increase also reflected the above shift in households income from low and moderate to high.

Labor Force

Table 3 reveals occupational trends in Millbrae for the last two decades and a comparison of 1970 occupational distribution in the County with Millbrae. It can be seen from the table that the professional, and clerical categories of workers in Millbrae have grown during the last 20 years.

In 1970 Millbrae had 31.1% of its labor force employed as professionals, managers, and administrative workers, while the County as a whole had 28.1% of its residents so employed. This continued Millbrae's trend of having a larger proportion of its population in higher wage earning categories than the County. It is apparent that Millbrae's wage earning population has become both more experienced in occupying higher skill level positions and more affluent while doing so, as indicated by the data on income previously discussed.

TABLE 3

LABOR FORCE CHARACTERISTICS

	Millbrae		Millbrae		Millbrae		San Mateo County	
	1950	%	1960	%	1970	%	1970	%
Professional, Technical, Kindred	517	14.8	1,031	15.8	1,601	17.0	41,454	17.2
Managers, Administrators	769	22.0	980	15.0	1,324	14.1	26,166	10.9
Sales Workers	407	11.6	878	13.5	1,163	12.4	22,513	9.4
Clerical, Kindred	567	16.2	1,263	19.4	2,268	24.1	54,787	22.7
Craftsmen, Foremen	569	16.3	869	13.3	1,336	14.2	33,559	13.9
Operatives	291	8.3	600	9.2	432	4.6	17,409	7.2
Transport Equipment Operatives	-	-	-	-	181	1.9	7,918	3.3
Laborers Excluding Farmers	105	3.0	168	2.6	203	2.2	8,356	3.5
Farm Workers	-	-	-	-	20	.2	1,027	.4
Service Workers	266	7.6	492	7.6	816	8.6	25,142	10.4
Private Household Worker	266	7.6	402	7.6	49	.5	2,705	1.1
Not Reported	8	.2	-	-	-	-	-	-
TOTAL	3,499	100	6,515	100	9,393	100	241,036	100

Source: U.S. Census, 1960, 1970

Commercial Activity

Millbrae's population was 3.6% of San Mateo County's total population in 1960, increasing slightly to 3.7% in 1970. The percentage of the County's population living in Millbrae provides a reference point for determining whether the City is competitive with the other County communities for commercial markets. Table 4 shows that from 1960 to 1970, on the average for the decade, 3.71% of the County's retail trade was carried on in the City. On an average for the decade, 3.85% of the County's retail establishments were located in the City. These figures indicate Millbrae is doing its proportional share of the County retail trade.

An examination of particular sales categories, however, indicates that Millbrae is doing better in some parts of the commercial sector than in others. In 1960 the City did better than its share (3.6%) of the County business in eating and drinking places (5.3%), drug stores (4.6%), packaged liquor stores (4.2%), and home furnishings and appliances (3.7%). Millbrae did less than its share of County business in general merchandise stores (0.4%), and auto dealers, suppliers and service stations (1.8%). In 1970 the areas where the City did better than its proportion had increased in number: apparel stores (5.4%); home furnishings and appliances (5.3%); other retail stores, primarily specialty shops (5.2%); food stores (4.6%); general merchandise (4.3%); and eating and drinking places (4%). By 1970 the City was doing less than its proportional share in all other nonretail outlets (1.2%) and building materials and farm implements (2.9%).

These comparisons over time indicate a shift in Millbrae's commercial sector from a neighborhood center providing convenience goods such as drugs, foods, restaurants and liquor stores, to a more diverse shopping area serving a broader base of people's needs: apparel, general merchandise, specialty stores, home furnishings and appliances. Despite increased diversification of the City's commercial sector over the decade, it remains highly specialized, serving primarily local needs for frequently purchased items.

From 1969 through 1971, there was a drop in retail sales as a percent of the County's total, indicating the increasing impact of major regional shopping centers within easy driving distance of Millbrae. These centers offer easy "one-stop" shopping convenience with ample parking.

TABLE 4
RETAIL TRADE CHARACTERISTICS, 1960 - 1971

<u>Year</u>	<u>Millbrae</u>				<u>San Mateo County</u>	
	<u>Retail Trade</u>	<u>% of County</u>	<u>Permits Issued</u>	<u>% of County</u>	<u>Retail Trade</u>	<u>Permits Issued</u>
1960	\$11,379	2.9	104	3.3	\$397,703	3,120
1961	\$11,257	2.7	101	3.2	\$410,966	3,189
1962	\$12,726	2.8	110	3.3	\$440,962	3,267
1963	\$14,099	2.9	118	3.5	\$484,097	3,384
1964	\$16,677	3.2	118	3.4	\$526,759	3,472
1965	\$21,070	3.7	138	3.9	\$564,426	3,566
1966	\$18,915	3.1	135	3.7	\$605,781	3,613
1967	no data	-	133	3.7	\$636,031	3,620
1968	\$25,112	3.5	129	3.5	\$708,823	3,694
1969	\$35,239	4.6	132	3.3	\$766,097	3,959
1970	\$30,463	4.0	148	3.7	\$769,764	4,016
1971	\$29,975	3.5	151	3.7	\$864,646	4,076

Source: State Board of Equalization Reports, 1960 - 1971.

TABLE 5
MILLBRAE'S PERCENTAGE OF COUNTY SALES

Category of Merchandise/Service	1960	1965		1970	
	% of Co. Sales	% of Co. Sales	% of Change 1960-1965	% of Co. Sales	% of Change 1965-1970
Apparel Stores	3.5	6.1	74.3	5.4	11.4
General Merchandise	0.4	2.8	600.0	4.3	53.6
Drug Stores	4.6	8.4	82.6	-	-
Food Stores	3.5	4.3	22.9	4.6	7.0
Packaged Liquor Stores	4.2	3.9	-7.1	3.5	-10.3
Eating and Drinking Places	5.3	5.6	5.7	4.0	-28.6
Home Furnishings and Appliances	3.7	6.1	64.9	5.3	-13.1
Building Materials and Farm Implements	2.4	3.0	25.0	2.9	-33.3
Auto Dealers, Suppliers and Service Stations	1.8	1.9	5.6	3.1	63.2
Other Retail Stores	3.3	2.8	-15.2	5.2	85.7
Total Retail Stores	2.9	3.7	27.6	4.0	8.1
All Other Outlets	3.1	1.3	-58.1	1.2	-7.7
Total All Outlets	3.0	2.8	6.7	2.0	3.6

Source: State Board of Equalization; Annual Summary Reports, 1960, 1965, 1970.

TABLE 6
TAXABLE TRANSACTIONS IN MILLBRAE

	<u>1960*</u>	<u>1965*</u>	<u>1970*</u>	<u>% of Change 1960 ÷ 1971</u>	<u>% of Total 1970</u>
Apparel Stores	975	2,347	2,996	207.3	8.2
General Merchandise Stores	168	2,285	6,117	3,541.1	16.7
Drug Stores	1,017	1,983	-	-	-
Food Stores	1,334	2,280	3,742	180.5	10.2
Packaged Liquor Stores	665	876	1,035	55.6	2.8
Eating and Drinking Places	2,549	3,705	3,898	52.9	10.6
Home Furnishings and Appliances	880	2,035	2,267	157.6	6.2
Building Materials and Farm Implements	1,025	1,427	1,431	39.6	3.9
Auto Dealers, Supplies and Service Stations	1,896	2,888	5,248	176.8	14.3
Other Retail Stores	869	1,244	3,729	329.1	10.2
Total Retail Stores	11,378	21,070	30,463	167.7	83.0
All Other Outlets	6,838	4,833	6,192	9.5	16.9
Total All Outlets	18,216	25,903	36,655	101.2	100.0

* In Thousands of Dollars

Source: State Board of Equalization Reports; Annual Summary, 1960, 1965, 1970.

TABLE 7

CITY OF MILLBRAEEFFECTIVE BUYING INCOME BY HOUSEHOLD 1966 - 1970

Effective Buying Income	1966		1967		1968		1969		1970		% of Change 1966 - 1970
	Amount	% of Change	Amount	% of Change	Amount	% of Change	Amount	% of Change	Amount	% of Change	
Per Household	\$13,127	-	\$13,916	6.0	\$14,986	7.1	\$15,800	5.4	\$16,601	5.1	26.5

Source: Sales Management, Survey of Buying Power, 1966-1970.

Municipal Finance

Included in the following evaluation of Millbrae's fiscal characteristics is a review of revenue and expenditure experience for the past six years, together with some estimates of future revenue and expenditure trends through 1980. Preceding the estimates is a list of assumptions influencing the estimates.

Historical Trends

An examination of past revenue sources reveals that Millbrae's major sources of revenue are property taxes, other local taxes, Special Gas Tax and Motor Vehicle License Fee. Table 8 shows revenue by source for the period 1965 to 1971.

Property tax has been the traditional revenue source for local governments in California. The data show that over the past six years property taxes have generated about 25% of Millbrae's total revenues. Of all revenue sources, the property tax is the largest potential source of revenue over which the City has control. Within certain constraints imposed by the State, the property tax rate may be adjusted by the City Council to meet the City's changing revenue requirements. The major type of land use taxed in Millbrae is residential. It is not anticipated that this will change significantly in the coming decade. Therefore, the major property tax burden is, and probably will continue to be, borne by the homeowner.

There is a correlation between city-wide assessed valuation and the tax rate. Marked increases in assessed value may make it possible to lower or stabilize the tax rate. The entire City of Millbrae is reassessed every four years. Building permits issued in the interim years provide information that aids in estimations of increases in assessed valuation. A 5% increase in assessed value provides a 5% increase in property tax revenue, with no adjustment in the tax rate. It is widely recognized there is a fiscal advantage in encouraging high value developments, particularly those that generate minimal service costs.

The second major source of tax revenue to Millbrae is Other Local Taxes such as sales and use taxes, franchise, cigarette and transfer taxes. These taxes represented over 17% of Millbrae's total revenue in 1971. Moreover, these taxes showed an increase in the percentage of revenue they provided to the City over the six-year period of 1965 - 1971. These taxes were the fastest growing source of revenue during the last six years.

State Board of Equalization data indicated that Millbrae received a proportional share of sales tax revenues based on the size of the City's population relative to that of the County. The sales tax trends over the past decade indicate that Millbrae can expect to continue to receive its proportional share of County sales tax revenue. This assumes, of course, that shopping patterns will remain relatively unchanged. There is a limit to the amount of increase in revenues from the other local taxes which can be anticipated.

TABLE 8

STATEMENT OF REVENUES FOR THE CITY OF MILLBRAE, 1965 - 1971

<u>General Fund</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>
General Property							
Taxes	\$ 279,111	\$ 332,654	\$ 306,962	\$ 418,141	\$ 437,909	\$ 474,648	\$ 482,161
Other Local Taxes	146,762	170,568	182,119	242,423	292,099	340,922	331,296
Licenses & Permits	83,025	71,014	55,658	58,063	72,993	57,584	53,560
Current Service							
Charges	6,445	2,285	2,177	5,484	3,410	2,194	2,821
Fines, Forfeitures							
and Penalties	4,166	6,024	6,202	4,352	6,238	2,597	8,870
Interest Income	9,148	11,012	13,467	27,414	44,851	48,934	25,382
Revenues From							
Other Agencies	17,456	17,709	14,915	18,058	27,678	23,275	28,940
Sundry Local							
Revenues	15,885	14,006	10,803	36,142	30,288	41,402	63,371
Subtotal General							
Fund	561,998	625,272	592,303	820,077	915,466	991,556	996,401
Motor Vehicle							
License Fee	115,224	120,800	131,965	134,478	140,509	144,654	156,470
Traffic Safety							
Fund	22,246	44,998	51,727	52,750	67,110	84,919	81,841
Hotel-Motel Tax							
Fund	-	-	10,962	57,151	70,065	82,306	70,014
Special Gas Tax							
Fund	149,489	148,690	169,870	183,359	177,903	184,602	219,968
Transfers to							
Other Funds	227,390	283,391	551,654	204,227	242,472	277,076	372,272
Sewer Fund	123,777	109,860	105,631	156,983	159,063	-	-
Other Revenue	-	1,638	-	-	-	-	-
TOTAL	\$1,200,124	\$1,333,011	\$1,614,112	\$1,609,025	\$1,781,873	\$1,766,903	\$1,898,176

TABLE 9

PERCENTAGE OF
REVENUES BY CATEGORY
MILLBRAE 1965 - 1971

	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>
General Property Tax	23.3	24.9	19.0	26.1	24.7	26.8	25.5
Other Local Taxes	12.2	12.7	11.3	15.1	16.5	19.3	17.5
Licenses and Permits	6.9	5.3	3.4	3.6	4.1	3.4	2.8
Current Service Charges	0.5	0.2	0.1	0.3	0.2	0.1	0.1
Fines, Forfeitures and Penalties	0.3	0.5	0.4	0.3	0.4	0.1	10.5
Interest Income	0.8	0.8	0.8	2.3	2.5	2.8	1.3
Revenues from Other Agencies	1.5	1.3	0.9	1.1	1.6	1.3	1.5
Sundry Local Revenues	1.3	1.1	0.7	2.2	1.7	2.3	3.3
Subtotal -- General Fund	46.8	46.8	36.6	51.0	51.7	56.2	52.5
Motor Vehicle License Fee	9.6	9.1	8.2	8.4	6.7	8.2	8.2
Traffic Safety Fund	1.9	3.4	3.3	3.3	3.7	4.8	4.3
Hotel - Motel Tax Fund	-	-	0.7	3.6	3.9	4.7	3.7
Special Gas Tax Fund	12.5	11.2	10.5	11.4	10.0	10.4	11.6
Transfers	18.9	21.2	34.2	12.7	13.6	15.7	19.6
Sewer Fund	10.3	8.2	6.5	9.6	8.9	-	-
Other Revenues	-	0.1	-	-	0.5	0.1	0.1
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Millbrae City Audits, 1965 - 1971.

First, it is expected that the City's population, having reached the desired holding capacity, will stop growing by 1980. If the City's population does level off while the County's population continues to grow, Millbrae's proportion of the County's total will diminish. Moreover, as the City's population levels off, so will the per capita returns from sales tax.

The third major source of revenue to the City is the Special Gas Tax. This money is allocated to the City on the basis of population. Again, as population growth slows, a lesser increase in these revenues can be anticipated. However, since the rate of per capita return is set annually by the State, Millbrae would only be affected if their growth were disproportionately low. This source of revenue will most likely remain a constant 10 to 11% of the city's revenues for the foreseeable future. The Special Gas Tax Fund is restricted in its use. It may only be used for street and highway improvement and maintenance.

The final major source of revenue for the City of Millbrae is the Motor Vehicle License Fee. This fee represents 7 to 8% of the City's revenue. This source of revenue is based, to a large extent, on the size of the City's population. While the City is expected to reach its maximum population size in the next decade, it is also showing signs of attracting more middle and high income residents. Frequently increasing prosperity is accompanied by multiple auto ownership. However, all things considered, Motor Vehicle Registration Fees should be considered a limited source of future revenue for the City, and one which is unlikely to increase in its proportion of total revenue.

About 35% of Millbrae's revenue comes from a wide variety of sources. An examination of the figures on Tables 11 and 12 reveals that over the past six years there have been few significant changes in any of these sources. This remaining 35% includes: interest income, traffic fines and Hotel-Motel Tax. Interest income depends on the amount of reserves, their careful placement and interest rates. The Traffic Safety Fund gains revenue from traffic violation fines; stringent law enforcement will keep this fund a steady source of revenue. The Hotel-Motel Tax Fund is a tax levied on all motel and hotel rooms in the City. Twenty-five percent of the Hotel-Motel Tax revenue is allocated for community promotion. The remainder of this revenue is unrestricted. Given Millbrae's proximity to the San Francisco International Airport, it can be anticipated that the current motel and hotel occupancy rates will, at least, remain constant, and may increase. New development would also boost this source of revenue.

Millbrae like most California cities, has experienced an increase in the cost of City services in the past seven years. The data on Tables 13 and 14 reveal that, while this increase in expenditures has not occurred each year, the increase in City expenditures between 1965 and 1971 has averaged 10.9% annually.

A breakdown of City expenditures by type reveals that on the average the rate of increase of operating costs has been greater (14.1%) over the 1965 to 1971 period than has the increase in the average annual capital outlay (3.2%). During the period studied, operating expenses averaged about 62% of total City expenditures. There is no reason to believe that this trend will change. Therefore, it may be expected that operating expenditures will continue to represent the major and growing portion of City expenses.

The majority of the City's operation expenses fall into four categories: general government, police, fire and public works. General government includes the salaries and other operating expenses of the City Manager's office, the City Council, the City Treasurer, City Attorney and the City Clerk's office. This category has shown an almost steady increase in expenses each year. With the increasing cost of services and cost of living, there is little likelihood that this 12% average rate of increase will decline significantly. The police and fire department costs exceed general government, and have also increased annually. The figures for Milbrae reveal, however, that the cost of the fire department is not increasing quite as rapidly each year (10%) as the cost of the police force (11%).

The public works category includes the City Engineer and street maintenance functions. The three annual increases in the public works budget is accounted for by increases in personnel and a greater assumption of work by City employees. A change in accounting measures may also explain in part the large increases.

The remaining categories in operating expenses are Community Development, Recreation and Parks, Library and General Buildings. Over the seven-year period each of these categories has shown increases, but they have been significantly less than the other four major categories. Community Development includes salaries for the Planning Administrator and Building Inspector (average annual increase 2%). Parks and Recreation includes salaries for park personnel and maintenance expenses for local parks. While the average annual increase for parks and recreation has been quite large during the last six years, Parks and Recreation operation represented only 8% of the City's total expenditures in 1971. The two categories of City expenditure which have changed the least over the period studied were the library and general building. The library expense represents staffing and general maintenance of the structure. General building includes the maintenance of City Hall and its adjacent parking lot. These expenditures can be anticipated to increase slowly in the future since renovation expenditures are included under the capital outlay. However, any increase in City Hall or library acquisitions would cause an increase in operating expenses.

TABLE 10

CITY OF MILLBRAE EXPENSES BY FUNCTION1965 TO 1971

	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>
<u>Operating Expenses</u>							
General Government ¹	160,263	141,222	166,567	237,690	261,540	274,333	309,199
Community Develop. ²	36,103	30,919	22,736	26,992	38,574	30,500	34,852
Police	183,014	214,424	245,319	251,588	292,984	321,189	353,248
Fire Department	134,775	142,988	163,069	185,755	218,981	228,048	240,004
Public Works ³	71,511	71,002	147,475	198,007	220,362	230,209	231,670
Recreation & Parks	3,363	11,845	9,420	74,155	81,785	89,230	134,686
Library	12,500	9,520	10,348	11,325	11,516	12,648	12,730
General Building	15,405	10,995	16,274	13,294	12,529	12,849	15,200
<u>Capital Outlay</u>							
Debt Service	1,790	797	120,755	149,362	147,291	117,922	111,232
Street Lighting	33,407	44,393	50,399	2,268	1,198	562	5,245
Park Development	45,886	55,259	69,495	41	1,088	4,185	92,872
Drainage Works	15,754	27,032	---	---	7,113	14,020	6,269
Curb, Gutter & Side- walk Improvements	---	---	---	2,535	169	949	6,021
Equipment Replacement	---	---	---	---	27,791	19,684	18,135
Community Promotion	5,671	4,312	12,998	13,050	10,993	11,540	23,204
Gas Tax Funds (Street & Highway Improvement)	---	---	41,796	6,321	58,435	57,302	31,890
Sewer Maintenance & Operation Fund	164,361	152,798	85,232	94,485	133,154	---	---
Sewer Plant Construction Fund	---	---	201,415	446,467	430,504	---	---
Retirement Fund	18,000	50,183	60,709	---	---	---	---
Equipment & Street Improvements	86,167	36,600	103,527	---	---	---	---
Other Capital Improvements	---	---	---	34,515	6,286	421,741	26,156
TOTAL	987,975	1,004,298	1,527,534	1,747,760	1,562,293	1,846,798	1,652,613

¹ Includes City Council, City Administrator's office, City Clerk's office, City treasurer and City Attorney, Insurance, Retirement, Allowances & service expenses.

² Includes Planning Commission and Building Inspector.

³ City Hall Maintenance.

Source: City of Millbrae Audits, 1965-1971. Note: '65-'68 rounded to nearest dollar.

TABLE 11

CITY OF MILLBRAE EXPENSES BY PERCENT OF TOTAL1965 to 1971

	<u>1965</u> <u>% of</u> <u>Total</u>	<u>1966</u> <u>% of</u> <u>Total</u>	<u>1967</u> <u>% of</u> <u>Total</u>	<u>1968</u> <u>% of</u> <u>Total</u>	<u>1969</u> <u>% of</u> <u>Total</u>	<u>1970</u> <u>% of</u> <u>Total</u>	<u>1971</u> <u>% of</u> <u>Total</u>
<u>Operating Expense</u>							
General Government ¹	16.2	14.1	10.9	13.6	16.7	14.9	18.8
Community Development ²	3.7	3.0	1.5	1.5	2.5	1.7	2.1
Police	18.6	21.5	16.0	14.4	18.8	17.4	21.4
Fire	13.6	14.2	10.7	10.6	14.0	12.3	14.5
Public Works ³	7.2	7.1	9.7	11.3	14.1	12.5	14.0
Recreation & Parks	.3	1.2	.6	4.2	5.2	4.8	8.1
Library	1.3	.0	.7	.6	.7	.7	.8
General Building	1.6	1.1	1.1	.8	.8	.7	.9
<u>Capital Outlay</u>							
Debt Service	.2	.1	7.9	8.5	9.4	6.4	6.7
Street Lighting	3.4	4.4	3.3	.1	.1	-	.3
Park Development	4.6	5.5	4.5	-	.1	.2	5.6
Drainage Works	1.6	2.7	-	-	.5	.8	.4
Curb, Gutter & Sidewalk Improvement	-	-	-	.1	-	.1	.4
Equipment Replacement	-	-	2.7	.4	3.7	3.1	1.9
Equipment & Street Improvement	8.7	3.6	6.8	-	-	-	-
Retirement Fund	1.8	5.0	4.0	-	-	-	-
Sewer Maintenance & Operation	16.6	15.2	5.6	5.4	8.5	-	-
Sewer Plant Construction	-	-	13.2	25.5	2.0	-	-
Other Capital Improvements	-	-	-	2.0	.4	22.7	1.6
TOTAL EXPENDITURES	100.0	100.0	100.0	99.7	100.0	100.0	100.0

¹ Includes City Council, City Administrator's Office, City Clerk's Office, City Treasurer and City Attorney, Insurance, Retirement, Allowances and Service Expense.

² Includes Planning Commission and Building Inspector.

³ City Hall Maintenance.

Source: Millbrae City Audits, 1965-1971

Capital Outlay Expenses: Capital outlay expenses are those expenses incurred to expand community facilities. As Tables 10 and 11 reveal, these expenses range from park development to debt service. Some capital outlay projects are of short duration such as sewer plant construction while others are continual such as street lighting and debt service.

There is a less consistent pattern among capital outlay projects because many of them are undertaken and completed during a short period, meeting the community's need for a decade or more. For example, in 1965 the major capital outlay was in sewer maintenance and operation; in 1968 it was in sewer plant construction; in 1970 it was in a variety of small capital improvement projects; and in 1971 it was in park development. Each of these shifts reflects response to community needs and expectations at the time.

The one capital outlay expenditure which has been a continual significant expense is debt service. Debt service reached its peak in 1969 when it represented over 9% of all the City's expenditures. The City's apparent reluctance to pass further bond issues and the fact that the City is retiring its existing debts, indicates that debt service will continue to decline as a major capital outlay expenditure. Obviously, this would not be true if significant bond issues are passed and more debt was incurred.

A better measure of capital outlay expenditures is their average annual rate of change. While operating costs increased more than 14% per year from 1965 to 1971, capital outlay expenses on the average increased by only slightly over 3% per year. This low rate of increase can be expected to continue so long as City residents are relatively satisfied with the community facilities available to them.

Estimates of Future Revenues and Capital Outlays

Assumptions

1. There will be increased expectations as to City services, but continuing reluctance to increase bonded indebtedness.
2. Bonded financing, if used at all, will be used to finance long-term projects in order to permit future users of facilities to pay a share of the costs for benefits they receive.
3. No major changes in the City boundaries will occur.
4. The City's population will increase to about 25,000 during this decade (1970-1980) then will remain relatively constant and even decline as families become older and smaller.
5. The trend toward families with fewer children will continue.
6. Services of the City will continue to be of the highest quality that resources permit.

7. Although Federal Revenue Sharing is with us, it is not yet clear what the final amounts coming to Millbrae or final restrictions on use of the funds will be. For these reasons, later revisions on revenue projections may be necessary.
8. Property tax rates will be adjusted upward when necessary to meet increasing revenue needs.
9. Sales tax revenues will continue to be divided 55% to the General Fund and 45% for Capital Outlay.
10. Capital expenditure requirements will continue to be met on a priority basis through the Capital Improvements Fund.
11. Millbrae will remain predominantly a single-family residential community.

Future Revenue Trends

A review of Millbrae's revenue trends reveals a slow, constant rate of growth during the past decade. There is no reason, presently evident, to believe that this situation will change appreciably in the coming decade. The predominant residential character of the City is assumed to continue, although emphasis on nonresidential development could provide a more favorable revenue projection. None of the major sources of revenue for the City revealed any likelihood of rapid growth except, perhaps, sales tax revenues. This source may increase as a result of the increased consumption habits of an increasingly affluent citizenry. Positive action by the City to improve shopping facilities also may help capture a larger share of consumer dollars within the market area. Property tax revenues will increase at a constant rate, based on four year reassessments and higher assessed values as property value in the community increases. The other sources of revenue in the City of Millbrae will remain relatively constant, based on the assumption of minimal population growth.

Table 15 shows a high and low estimate for City revenue from 1972 to 1980. The low estimate is based on a minimal change in population growth, land value increase, and tax rate change. The high estimate is based on more ambitious projections of assessed valuation and a faster rate of reaching the City's maximum population of 25,000.

Other Sources of Revenue: An important facet of a city's revenue picture is its bonded indebtedness. Ability to issue bonds provides a source of funding for large capital improvements. Bonding permits a city to spread the cost of community improvements over time so that the costs will be borne by future as well as present users. Additionally, inflation has been growing at rates greater than annual interest rates, therefore it is unwise to put off construction or acquisition of needed facilities. A city's capacity to bond is based on a percentage of the total assessed value of property within the city and on the amount of bonds currently outstanding. Although

the legal limit is 15% of the assessed value, the practical limit is about 10%. The estimates on Table 12 show that using the practical bonding limitation of California cities (10% of total assessed value) Millbrae's indebtedness in the 1972 to 1973 fiscal year will be only 13.5% of its practical capacity to borrow. By 1980, if the City continues to retire its bonds at its present rate and does not sell any more bonds, the City will have dropped to 7% of its practical capacity to bond. Again, using 10% as a benchmark, the City now could borrow over \$6.5 million and in 1980-1981 an additional \$2.5 million. This reserve in bonding capacity provides Millbrae with a good credit rating, a large potential source of revenues for capital improvements and a source of funds for property acquisition.

The data included here indicate that, except for Revenue Sharing, no major changes in the sources or composition of Millbrae's revenues can be anticipated in the next decade. Moreover, it can be expected that, without increases in tax rates, the increase in revenues will be constant at a low rate. The City, however, carries very little debt, and thus, with voter approval, has resources at hand to meet important capital improvement needs.

Future City Expenditures

The data on current City expenditures reveal that on the average, City costs are increasing at 10% per year. However, City of Millbrae operating expenses are increasing more than four times as rapidly as capital outlay expenses. The reluctance of the City government to incur further bonded indebtedness indicates that although capital outlay expenses may increase by 1980, the increase is not likely to exceed an average of 5% per year. As stated previously, Millbrae's debt is a low percentage (13%) of its bonding capacity. Therefore, there is sufficient potential to meet major capital outlay expenditures which might be desired in the near future. In 1971, operating expenses consumed 60% of the total City revenues. While operating expenses should never equal 100%, in many cities operating expenses exceed 60% of revenues. Thus, Millbrae, providing it is willing to meet some of its capital outlay costs through bonding, has latitude to increase its operating costs and still cover them with current revenues.

Millbrae's expenditure picture is much like that of other cities. Cost of personnel and services continue to increase while revenues increase at a slower rate. Millbrae, however, is in a sound financial position with operating expenses at about 60% of revenues and with a small outstanding debt.

TABLE 12

ESTIMATED REVENUE FOR THE CITY OF MILLBRAE, 1972 to 1980

<u>Estimate</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Low	\$1,936,139	\$1,974,862	\$2,014,359	\$2,054,646	\$2,095,739
High	\$1,955,120	\$2,013,774	\$2,074,187	\$2,136,413	\$2,200,505
<u>Estimate</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	
Low	\$2,137,654	\$2,180,407	\$2,224,015	\$2,268,495	
High	\$2,266,520	\$2,334,516	\$2,414,551	\$2,476,688	

Source: Millbrae Capital Improvements Program, January, 1972.

Traffic and Transit Engineering Studies

Vehicular Circulation Studies

The firm of Kirker, Chapman and Associates, Consulting Civil Engineers, is under contract with Millbrae to prepare the Circulation Element of the General Plan. They are presently engaged in data collection and analysis of Millbrae's automobile circulation characteristics. They have made traffic counts of selected arterial in Millbrae. This data included annual traffic counts as well as 24 hour counts.

Land use policies will have to be developed before further traffic projections and analysis can continue. Preliminary Development Plans for the Core Area and Airport Vicinity Area are expected to provide the sort of land use planning information that will assist the traffic consultants. Therefore recommendations concerning traffic circulation will be made later in the planning program.

Current Transit System Proposal

During the last 10 years there has been considerable study concerned with bringing rapid transit to the Northern Peninsula area and San Francisco International Airport in particular. The latest study, entitled "San Francisco Airport Access Project", executed through a joint powers agreement by the City of San Francisco, San Mateo County, and the Bay Area Rapid Transit District, was completed in 1971. This study recommended the extension of BART from Daly City to the Airport and beyond to Burlingame. The findings of the Airport Access Project report state "the growing demand of San Francisco International Airport, the need for improved access, and the limited land available have sparked at \$200,000,000.00 development program. The next five years will bring major improvements in all the terminal, runway, and access facilities. This report explores transit access in light of the airport's development program."

The recommended alignment includes a station one level below the central parking garage and just west of the new control tower at the garage's center. The alignment of the tracks would then turn westward from the terminal, tunneling below Bayshore Freeway to just north of Millbrae Avenue where the last station of the project would be located.

A station just north of Millbrae Avenue, on the Chrysler property, was proposed, but not developed in detail by the study. Patronage, planning, engineering, and architecture were not developed due to the late realization by the consultants of the station's need.

South of the Millbrae Station, the proposed right-of-way would curve below Millbrae Avenue and surface east of the Southern Pacific main line before entering the transit car yard proposed for Burlingame.

While recommending the implementation of the extension of BART to the airport, the study listed the Millbrae station as being one which needs much more study and cost estimating as well as review by the community. Clearly, the costs and benefits for Millbrae, in locating a station in the area proposed, have not been determined either by the planners involved or the community. However, there does appear time for Millbrae to decide for itself if it wishes to have a BART facility and if so, where it should be located.

Bicycle Path Proposal

A proposed bicycle route for Millbrae was submitted to the Planning Commission in May 1972. The preliminary plans show a bicycle path extending south from Capuchino High School along Broadway to Meadow Glen and then further south along Magnolia to Chadbourne. The route extends up Chadbourne to South Ashton and then southerly along South Ashton to the Burlingame City limits. East-West spurs of the route follow Murchison Drive to Conejo until it reaches Skyline Boulevard.

Current San Mateo County Plans

The County is currently in the process of revising and updating its General Plan. Much of the planning effort is devoted to completing mandatory special plan elements. Their interest generally is concentrated on the unincorporated areas. However, the Bayside planning program is presently preparing studies on airport environmental impact, open space needs and circulation.

Airport Impact

The County's Airport Land Use Committee has established Interim Airport Influenced Areas. Millbrae was considered to be within the influenced area of San Francisco International Airport. Noise Exposure Forecast (NEF) contours around the airport were computed, based on ABAG's Bay Area Study of Airport Requirement findings. The established NEF contours conform to readings of 30, 35, 40, and 45 decibels. The County Planning Department now is advised by cities containing NEF contours when residential construction is contemplated for an area inside the NEF 40 contour. The County reviews proposed use plans for noise abatement insulation within the proposed structures. More definitive standards for development within updated NEF contours eventually will be established.

Open Space

County planners are currently inventorying available open space within Bayside communities to determine which cities have sufficient open space for their population. This is part of the County-wide open space plan being updated to conform to new State requirements. Millbrae is fortunate in having considerable open space, however, much of it is not available for use by the public. Generalized land use information has also been mapped and tabulated by County planners as part of an updated County land use map.

Circulation

The 1962 City-County Highway Plan proposed a grade separation of Millbrae Avenue and the Southern Pacific Railroad tracks. This idea has since been rejected in Millbrae. State and County Plans for the Millbrae SPUR project were abandoned and the right-of-way conveyed to the City. The County at present has no further plans for altering circulation routes within Millbrae.

Vacant Parcels

Chrysler Property

This particular parcel occupies 9.3 acres situated on Millbrae Avenue to the west of the Southern Pacific tracks. It is bounded by Garden Lane on the north, Millbrae Avenue to the south, PG&E right-of-way to the east, and Millbrae Materials to the west. The parcel previously was used by a new car dealership. While it is presently unoccupied, structures such as a showroom and egregious light fixtures still remain. The City of Millbrae has recently decided to extend Rollins Road across Millbrae Avenue over the Chrysler property to intersect with Garden Lane. This is designed to alleviate congestion at Amador Street, further east of Rollins, and provide another access road to Bayside Manor residential area. The Chrysler property suffers to some degree from an access problem. To reach it from the west it is necessary to make a left turn off of Millbrae Avenue, which tends to obstruct traffic on Millbrae Avenue.

San Francisco Water Department El Camino Parcel

The Water Department parcel on El Camino Real in Millbrae occupies 15.4 acres, and borders the Southern Pacific right-of-way to the east. The parcel presently is being used as a corporation yard and Peninsula Division Headquarters for the San Francisco Water Department. The land is generously endowed with trees, landscaping and presently contains the oldest structure in Millbrae. Centrally situated as it is, with excellent access, the potential uses are many. Questionnaire respondents seemed to favor hotel-motel development or a type of professional-administrative use, if the land were to be developed.

Water Department Skyline Parcel

The second Water Department parcel under study is the 55.6 acre parcel in the northwest corner of the City, bordering Skyline Boulevard. The site is presently used for a new filtration plant serving the Peninsula and San Francisco. There are several equestrian stables on the property. The land has remained in its natural state. The area is quite hilly and provides unexcelled views of the northern Peninsula. While annexation possibilities seem remote at present, the site does offer opportunity for open space and passive recreational uses for Millbrae residents.

Archdiocese Lands

The Archdiocese lands occupy 21.7 acres of hilly, wooded land between Magnolia Avenue and the Green Hills Country Club. The acreage is actually divided among three parcels, two east and one to the west of Laurel Avenue. The lands are largely unimproved; five acres are used for growing heather on the western most parcel. A parochial school fronts on Broadway. The City Council placed before the voters a municipal bond issue on the purchase of the Archdiocese properties for City open space. Although a majority of voters were in favor, the issue did not get the required two-thirds. Subsequent to the vote, and after considerable study, the City approved residential development plans for the property.

Airport Properties

Situated adjacent to Bayshore Freeway, between Millbrae Avenue and the City boundary to the north, the San Francisco Airport owns approximately 50 to 60 acres of land zoned industrial. The property is about 1.25 miles long and is presently undeveloped. It consists primarily of flat, low-lying land, underlaid by soft Bay mud. The area is subject to flooding during heavy rainfall. The land is primarily undeveloped open space. Cattle graze on the property at times.

Access to the property presents serious problems. Only narrow residential streets on the west side of the property present potential access; very inappropriate for industrial traffic. The Bayshore Property Master Plan, prepared for the airport in 1968, indicates a pedestrian and vehicular overpass bridging the freeway and providing access to the property. Clearly this question will need further study before the land's potential can be calculated. Airport officials feel that the land's potential can be calculated. Airport officials feel that the lands are most suited for direct airport service type industries: catering, office uses, car rentals, etc. Any proposals for other than existing open uses should be subject to critical scrutiny and environmental impact evolution.

Green Hills Country Club

The Green Hills Country Club is the largest reservoir of privately owned open space in Millbrae. Presently used as a golf course, it occupies approximately 103 acres, bounded by the Archdiocese properties, Helen Drive, the SPUR properties and homes along Capachino and Hacienda Way on the north. The property is accessible only by Ludeman Lane to the south. The zoning on the land is presently R-1, which would permit single-family residential development at about seven units per acre. Prevailing attitudes are to preserve the property in its present use.

LAND USE

Purpose and Scope of the Land Use Element

The Land Use Element designates the proposed general distribution location and extent of the housing, business, industry, open space and agriculture, natural resources, recreation, scenic resource enjoyment, educational facilities, public buildings and grounds utility and other uses of the land. Land uses are designated on the basis of the needs of the present and projected populations of the City of Millbrae. Needs are determined by economic and social objectives and by environmental standards established on a regional basis.

Existing Land Use

Since 1966, when the last citywide land use inventory was conducted for the previous General Plan Study, new development in Millbrae has been almost entirely residential. New single-family home construction covered approximately 20 acres; duplex development, approximately three acres; and apartment development, over 16 acres.

Single-family and duplex development now represents about half of Millbrae's total developed area (1,772 acres); apartments represent another 3%. Motel, trailer park, and professional office development has remained almost unchanged, still representing only about 1% of the City's development. Retail business, private recreation, and general commercial uses together constitute about 9-1/2%. No new industrial development has taken place since the 1966 inventory; industry in Millbrae remains far below the regional average at only .6% of the City's total development. (Access deficiencies have been the primary inhibition to development of much of Millbrae's industrially zoned land.) Public and quasipublic uses (i.e., City offices, schools, parks, churches) and public utilities account for nearly 15%. The final one-fifth of the City's entire developed area is taken up by the public street system, including portions of the two State Highways which pass through Millbrae.

The table on the following page shows basically the current total amounts of the various land uses in Millbrae and the subtotal amounts located in each zoning district. Again based on an analysis of building trends since the 1966 land use inventory, it can be seen that new development has conformed to the land use pattern established by the 1967 General Plan as amended and the current zoning ordinance designed to implement that Plan.

TABLE 13

MILLBRAE LAND USE - ZONING SUMMARY 1973*

LAND ZONING USE	EXISTING COUNCIL 1979														
	Single Family	Duplex	Apts.	Motel, Trailer Park & Profes- sional Off.	Retail Bus. & Private Recreation	General Commercial	Industrial	Public & Quasi Public Utility	Streets	Subtotal Acres Dev. in Zone	Acres Dev. in Zone as % of Dev. Area of City **	Vacant	Agriculture	Total Acres in Zone	Total Acres in Zone as % of Total Area of City **
R-1	801.09	2.79	0.26	-	108.85	-	-	162.77	-	1,075.76	60.71%	145.41	21.75	1,242.92	60.27%
R-2	48.04	17.13	00.61	-	-	-	-	3.59	-	69.37	3.91%	.84	-	70.21	3.40%
R-3 R-G	2.76	1.59	38.52	5.06	1.03	0.30	-	3.38	-	52.64	2.97%	6.69	-	59.33	2.87%
C-1 C-1-H	1.53	-	1.02	4.09	29.25	3.09	9.37	1.58	-	49.93	2.81%	9.46	-	59.39	2.87%
I	1.25	-	5.58	11.67	1.67	15.30	1.15	66.67	-	103.29	5.82%	43.70	-	146.99	7.12%
P-D	-	-	7.80	-	11.16	-	-	13.93	-	32.89	1.85%	5.77	-	38.66	1.87%
Unzoned	-	-	-	-	-	-	-	10.53	377.33	387.86	21.89%	56.87	-	444.73	21.56%
Total Area Dev. by Land Use	854.67	21.51	53.79	20.82	151.96	18.69	10.52	262.45	377.33	1,771.74	100.00%	268.74	21.75	2,062.23	100.00%
Land Use as % of Total Dev. Area **	48.23%	1.21%	3.03%	1.17%	8.57%	1.05%	.59%	14.81%	21.29%	100.00%	-	-	-	-	-
Land Use as % of Total City Area **	41.44%	1.04%	2.60%	1.00%	7.36%		.90%	.51%	12.72%	18.29%		13.03%	11.05%	100.00%	

* Updated from 1966 data, Hahn-Wise and Associates, Inc.

** Do not total 100.00% because of rounding of figures.

Notes: Unzoned Utility includes 9.91 acres of Railroad.
 Unzoned Vacant includes 41.18 acres of Junipero Serra R.O.W.
 Industrial Zone Utility includes 9.94 acres of PG&E property
 Streets include 81.46 acres of State Highway.

SAN BRUNO

San Francisco International
Airport

Bayshore Frwy.

S.P.R.R.

Magnolia Ave.

Junipero

Serra
pathway

Millbrae Ave.

Junipero Frwy.

BURLINGAME

MILLBRAE PLANNING AREAS



For purposes of describing existing and proposed land uses throughout Millbrae, the City has been divided into four geographical areas.

AREA A: West of the Spur Property at Route 280

Description. This land slopes downward from Interstate 280 on the west to the Spur property on the east, with numerous rather large, undeveloped ravine areas and is almost exclusively single-family residential, the only multi-family structures being those along Vallejo Drive on the western periphery of the City. There are three neighborhood parks and two elementary schools in this area, as well as two large parcels owned by the San Francisco Water Company. One of these parcels is 16.6 acres of steep, heavily forested land; the other, a 56 acre parcel of which only a corner falls in Millbrae, is also quite steep. Both are unsuitable for development, but are scenic and aesthetic resources which may provide passive recreational use and afford panoramic views of the Bay.

Appraisal. The Land use in this area is low density residential. Planting of trees and preservation of the natural vegetation in undeveloped areas has, in some cases, been used as a measure to maintain or increase soil stability on these lands. (Refer to Safety and Seismic Safety Elements.)

The three neighborhood parks provide a distribution of recreational areas to the northern, central and southern sections of this area. However, the Park in the central section is located so far to the east that it serves only part of this section. The very northernmost part of Area A is also relatively inaccessible to any City parks; however, development of the Spur property will improve access.

Zoning in Area A permits a minimum lot size of 5,000 sq. ft. This implies that large parcels in steep, unstable areas may be subject to resubdivision. Therefore, larger minimum lot sizes are recommended.

Circulation in this area generally is adequate; however, there is a need to improve the alignment of Helen Drive, near the City water tower.

Proposed Changes

1. Steep areas with houses on large lots should be rezoned to lower density (see Open Space Element).
2. The circulation pattern should be realigned to reduce the incidence of accidents on Helen Drive. (See Circulation Element.)

Area B: Generally Eastward of the Spur to Magnolia Avenue

Description. The Spur is a wide (100-400 feet) north-south greenbelt separating Area A from Area B; only four east-west streets cross the Spur.

The northern half of Area B is a predominantly single-family residential area. The large (103 acres) open space of the Green Hill Country Club, two elementary schools, Capuchino High School, four churches and a small park, are the other existing uses of land in this section.

The southern half of Area B is characterized by single-family residential housing, several blocks of higher density housing, two elementary schools, Mills High School, the Civic Center and a large park. Automobile accidents are frequent here.

Appraisal. Neighborhood parks are inadequate in spite of the fact that several very large parcels of open space exist in this area. There remains a need for additional public recreation facilities.

Proposed Changes.

1. The Archdiocese's vacant land is shown for single-family residential development.
2. Library Park, at the southwestern corner of the Civic Center property, is so designated.
3. Professional/administrative office use is recommended for the vacant lot across Library Avenue from the library. Height should not exceed six stories.
4. Circulation in the southern half of Area B should be studied to determine whether accident reduction can be accomplished by controlling certain intersections and protecting some residential streets from through traffic.
5. The R-2 zoned area between Millbrae Avenue and the alley is recommended for upgrading under a new Stabilization Zoning.

AREA C: Magnolia Avenue Eastward to the Railroad Tracks

Description. Area C contains a relatively modern commercial area in its southernmost blocks (south of Millbrae Avenue). Broadway, in the southern half of Area A, traverses an area of medium to high density housing and the City's older shopping district, the "Millbrae Square" shopping center and attendant parking lots. The Civic Center also is in Area C.

The northern part of Broadway continues through a mixed area of offices, retail uses, and low and high density housing. El Camino Real is generally bordered by strip commercial development in Millbrae. Between El Camino and the railroad are two single-family subdivisions and one mixed density neighborhood, some high density housing, a large parcel owned by the San Francisco Water Company (15.3 acres) and miscellaneous visitor commercial uses.

Appraisal. This area is interspersed with many vacant parcels; most of the existing commercial areas are in need of major redesign, landscaping, circulation, and pedestrian-orientation. Parking in retail shopping areas is either inadequate or inconvenient for pedestrians. (The El Camino-Broadway Core Area is the subject of a special plan published separately.)

Proposed Changes

1. The Spur property south of Millbrae Avenue is shown for public open space or recreational uses.
2. Additional offices and service uses are proposed for the remaining vacant parcels on El Camino Real. Emphasis should be given to quality of design and landscaping.
3. The following parcels are shown for administrative and professional office or hotel/motel development: the Water Department's El Camino Real site, the Chrysler property.
4. The mixed density neighborhood between El Camino and the railroad tracks is recommended for zoning under the new stabilization district.

AREA D: East of the Railroad to the Airport

Description. The southernmost portion of Area D, south of Millbrae Avenue, is occupied by a combination of commercial and industrial uses. The remainder of the area is divided between two single-family subdivisions, Bayside Manor and Marina Vista, which are bounded on the east by vacant lands belonging to the San Francisco Airport and separated by a P. G. and E. substation. Easterly of the Freeway, Millbrae lands include a parcel occupied by a hotel, an adjacent vacant parcel, and undeveloped land adjacent to the Bay.

Appraisal. Traffic circulation to the two subdivisions is poor; in effect they are cut off from the rest of the City and from each other. Although this situation may protect them from noisy traffic, Aviador Avenue (the only way out of Bayside Manor) is often congested and the site of accidents at its intersection with Millbrae Avenue. Both subdivisions are in danger of being totally cut off during fire emergencies, particularly if a train is blocking the grade crossings (see Safety Element). At the present time, the airport's vacant lands are inaccessible. Lands east of the Freeway suffer from congestion of the Millbrae Avenue interchange and the Millbrae-Old Bayshore intersection.

The noise from airplanes taking off and landing at the airport reaches extremes on a regular basis (see Noise Element).

Proposed Changes

1. Rollins Road is proposed to be extended to Garden Lane with Aviador Avenue modified to provide safer access to Bayside Manor.
2. The vacant airport lands are recommended for open space uses.
3. The stabilization zoning district should be applied to the area north of San Jose Avenue (in the Marina Vista subdivision) to recognize and cope with its mixed density characteristics.
4. The vacant parcel east of the Freeway and adjacent to the existing hotel should be developed with hotel and/or administrative office use.
5. Lands adjacent to Bay and Airport are recommended for development for passive Bay-Airport viewing.

Recommended Land Use Policies

The following is a summary list of the basic land use recommendations made in the various special elements of the Millbrae General Plan.

1. Apartment development should be primarily limited to what currently is zoned for such use.
2. As neighborhoods age, the City should provide all possible assistance for housing rehabilitation and maintenance measures.

4. The City should adopt ordinances, as necessary, to insure safe development in areas of known flood or geologic hazard.
5. Landscaping should be encouraged on private and public lands.
6. A Special Stabilization Zoning District should be established for treatment of neighborhoods in need of selective planning attention.
7. High occupancy structures or critical emergency facilities should not be located with an active fault's "zone of potential surface deformation."
8. Local building codes should require detailed geotechnical investigation of new development on Bay fill and steep slopes.

HOUSING

Purpose

The Housing Element of the Millbrae General Plan is intended to be the basic background document which examines the current conditions and problems of the housing stock in Millbrae. The Housing Element will provide the City with sufficient data, and policy recommendations to enable policy-makers to address current housing problems and deficiencies as well as assess the impact of any future residential growth. As one element of the City's General Plan, the Housing Element must be in harmony with the land use and population density provisions of the General Plan. These provisions form the framework within which the more detailed policies and recommendations of the Housing Element are intended to operate.

Policy Statement

1. Single family neighborhoods should be preserved and maintained as Millbrae's preferred residential land use.
2. As neighborhoods age, neighborhood rehabilitation and preventative maintenance measures should be encouraged and utilized.
3. Where possible, future developments should be designed to provide maximum usage of open space.
4. Older residential areas of the City should be encouraged to retain their single family character. Where necessary, the City should provide all possible assistance to homeowners deciding to upgrade and rehabilitate their property.

Existing Housing

A. Recent Growth

The total housing stock in Millbrae grew from 4,803 units in 1960 to 6,912 units in 1970 -- an increase of 44%. The comparable housing growth rate in San Mateo County was 34%. The majority of this growth during the last five to six years has occurred in multi-family development.

Construction during the 10-year period following 1960 resulted in a relative decrease of owner occupied units as compared to renter occupied units.

The same is true of single family homes as compared to structures containing two or more units. Trends in the County followed those indicated for Millbrae, only to a lesser degree.

TABLE 14

HOUSING AND HOUSEHOLD CHARACTERISTICS

	<u>Millbrae</u>		<u>San Mateo County</u>
	<u>1960</u>	<u>1970</u>	<u>1970</u>
Total Housing Units	4,803	6,912	190,446
Total Occupied Units	4,672	6,826	185,028
Single-Family Units	4,267	5,197	135,330
Percent of Total Units	89%	75%	71%
Multi-Family Units	536	1,675	52,888
Mobile Homes, Trailers	41	40	1,950
Owner Occupied Units	3,788	4,778	113,197
Percent of Occupied Units	81%	70%	61%
Renter Occupied Units	884	2,048	71,831
Percent of Occupied Units	19%	30%	39%
Persons Per Occupied Unit	3.3	3.0	3.0
Persons Per Owner Occupied Unit	3.5	3.3	3.3
Persons Per Renter Occupied Unit	2.5	2.3	2.4
Median Value			
Owner Occupied	\$21,700	\$38,500	\$30,400
Renter Occupied	\$98.00	\$171.00	\$154.00
Vacancy Rates			
For Sale	1.6	.4	.4
For Rent	2.8	2.9	5.2

As the balance of Millbrae's buildable land has steadily decreased over the years, new single family residential construction has correspondingly decreased. Duplex construction has remained nearly constant over the past 10 years. In 1960, single family housing made up 89% of Millbrae's entire housing stock, duplex and multi-family apartments comprising the 11% balance. By 1970, duplex and multi-family development had grown to 25% of the housing stock.

B. Age

Residential growth in Millbrae appears to have occurred in somewhat piecemeal fashion as principal residential neighborhoods were developed. For example, the first major residential development in Millbrae, prior to 1939 and during the immediate post-war period, occurred in the area adjacent to the present City-Hall and to the east of El Camino. More recent development in this older area has included large amounts of higher density apartments.

The Capuchino area was developed slightly later, a large part of it taking place during the decade of the 1950's. This is also true of the Highlands area. The Meadows area was built during the 50's and 60's, while the Mills Estate area grew mainly during the early 1960's. While single family home development has declined during the last 10 years due to the lack of developable land, higher density condominiums and apartments are still being built on the southwest fringe of the city adjacent to Skyline Blvd. The Archdiocese property remains the primary parcel currently available for development. Table 14 indicates various development periods in Millbrae.

C. Condition

Millbrae's housing stock, by all indications, seems to have been maintained exceptionally well. The 1960 Census of housing indicated that 98.5% of Millbrae's 4,803 units were sound. This compares favorably with County-wide figures which showed 96.4% of its housing was considered sound in 1960.

Based on a visual survey of structural conditions taken early in 1973 by the consultants, only about 20 residential structures in Millbrae can be considered substandard. Nearly all are detached single-family units located east of El Camino Real. Most of these houses need painting and suffer from poor yard maintenance; the degree of structural disrepair, however, varies considerably. About one-third of those noted are older wood-sided buildings where rehabilitation is questionable. In addition to deficient principal structures, many garages and storage sheds in the same neighborhoods show signs of structural sag and otherwise poor exterior maintenance.

TABLE 15
BUILDING PERMIT ACTIVITY

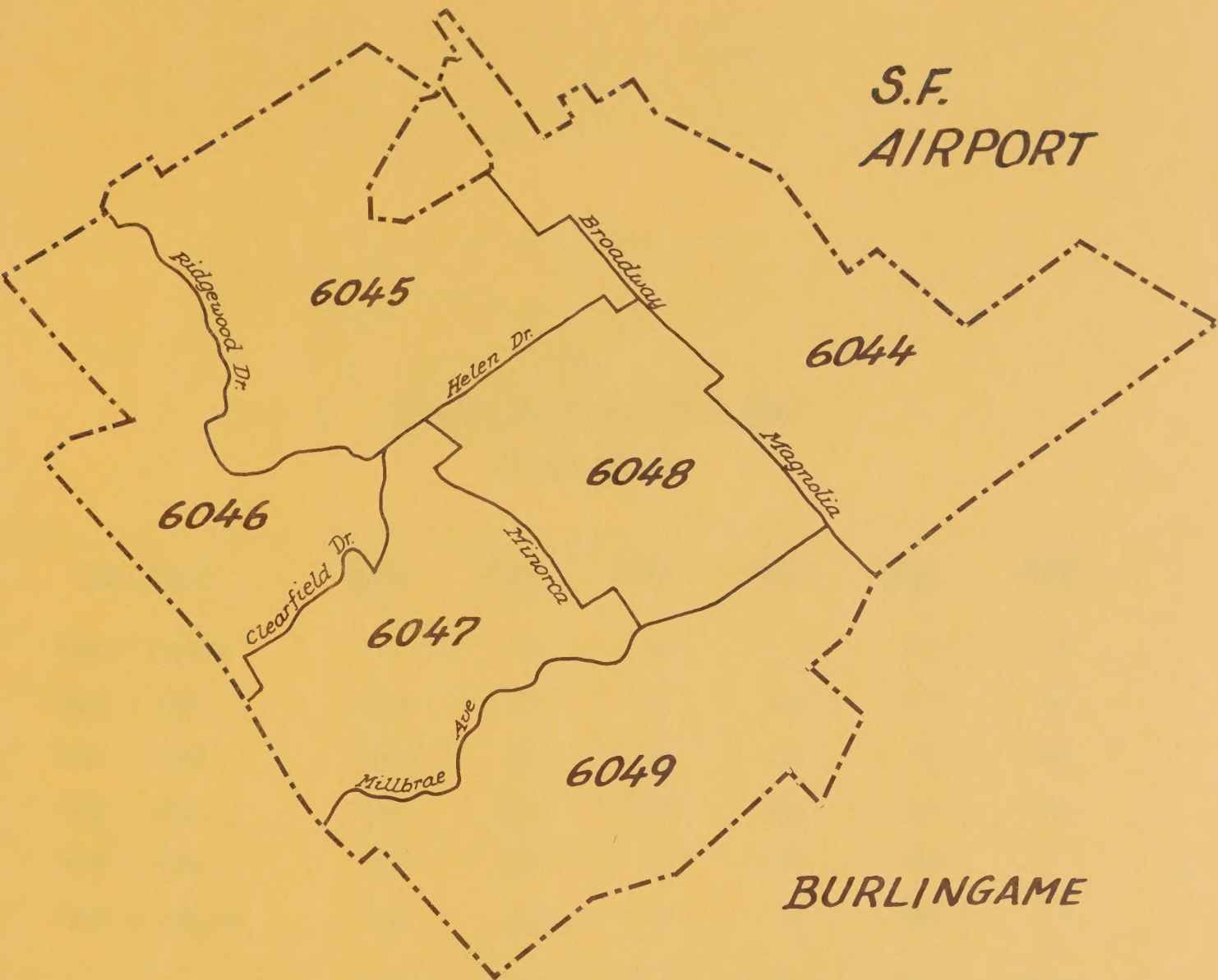
New Construction

	<u>Single-Family Residences</u>	<u>Duplex Units</u>	<u>Apartment Units</u>	<u>Total Units</u>
1962	136	10	-	146
1963	360	6	125	492
1964	116	26	170	321
1965	81	8	196	285
1966	87	4	-	91
1967	43	6	-	49
1968	33	8	150	191
1969	25	6	78	109
1970	12	4	28	44
1971	17	12	167	196
1972	26	6	215	247
1973 (through May)	5	2	-	7

 Source: Building Inspector's Reports for years 1962 - 1973, City of Millbrae.

SAN BRUNO

*S.F.
AIRPORT*



Millbrae Census Divisions

TABLE 16
HOUSING AGE IN MILLBRAE - 1970

CENSUS TRACTS

<u>Year Built</u>	<u>6044</u>	<u>6045</u>	<u>6046</u>	<u>6047</u>	<u>6048</u>	<u>6049</u>
1969 - 3/1970	-	5	10	5	194	5
1965 - 1968	109	43	129	145	173	112
1960 - 1964	385	64	253	91	93	473
1950 - 1959	568	399	433	281	177	371
1940 - 1949	481	396	14	316	450	-
1939 or before	195	36	9	46	445	4
Total Units	1,738	943	848	884	1,532	965

Source: U.S. Census of Housing - 1970

The greatest concentration of poor housing condition is located in a one-block area south of San Juan Avenue on the east side of El Camino Real. Included in this area is a cluster of small, deteriorating cottages, served only by a dirt driveway, and a poorly maintained trailer park which is overdeveloped by currently accepted site plan and density standards.

Tenure

Comparisons of the 1960 and 1970 Census revealed that the proportion of single-family homes in the total housing stock in Millbrae declined over the 10-year period from 89% to 75%. The County figure in 1970 was 71%. In a similar manner, owner-occupied units in Millbrae decreased from 81% to 70% between 1960 and 1970 while renter-occupied units showed a corresponding increase from 19% to 30%. Both figures were respectively higher and lower than the County figures of 61% for owner-occupied units and 39% for renter-occupied units.

Housing Costs

Value of owner-occupied homes and rental values increased impressively during the last decade. As noted in Table 19, median home values in Millbrae rose from \$21,700 in 1960 to \$38,500 in 1970, an increase of 77%. This was matched by a 75% increase in median contract rents, rising from \$98 in 1960 to \$171 in 1970. These sharp increases in values and rents are undoubtedly a result of many factors, two major ones being the shortage of "buildable land" in Millbrae, along with the growing desirability of living in Millbrae. These increases in value were paralleled but not matched by increases in the County. Median home values County-wide increased from \$18,400 in 1960 to \$30,400 in 1970; a 65% increase in the median value. Rents experienced a 62% rise from \$95 in 1960 to \$154 in 1970.

Table 18 indicates the distribution of owner and renter occupied units, their values and rents within geographic sections of Millbrae as portrayed on the Census Division Map.

The eastern portion of Millbrae Census Tract 6044 contains the lowest percentage of single-family structures to total housing units, the greatest number of larger apartment structures, and the lowest average home value and rents as compared to the rest of the community. This Tract also contains the largest number of overcrowded units (more than 1.01 persons per room).

Vacancy Rates

In 1960, homes available for sale in Millbrae represented 1.6% of the City's entire stock of owner-occupied units. By 1970, this figure dropped to .4%, seriously low when compared with a market selection considered adequate between 1% and 1.5%. Unfortunately, the 1970 County-wide vacancy rate of .7% suggests that many neighboring communities are unable to offer much more of a selection to families desiring to buy homes in the mid-Peninsula area.

TABLE 17

HOUSING CONDITION MILLBRAEHOUSING UNITS LACKING SOME OR ALL PLUMBING FACILITIES

Census Tract	Owner Occupied		Renter Occupied		Total	
	1960	1970	1960	1970	1960	1970
6044		3		3		6
6045		5		0		5
6056	8	0	4	0	12	0
6047		0		2		2
6048		1		4		5
6049		1		0		1
Totals	8	10	4	9	12	19

Source: U.S. Census of Housing, 1960 and 1970

TABLE 18

OWNERSHIP, VALUE AND VACANCY STATUS - MILLBRAE 1970

	<u>6044</u>	<u>6045</u>	<u>6046</u>	<u>6047</u>	<u>6048</u>	<u>6049</u>	<u>City Total</u>
Total housing units	1,738	943	850	884	1,532	965	6,912
Owner occupied	648	871	817	739	859	844	4,778
Median Value	\$27,000	\$33,400	\$42,100	\$40,700	\$34,600	\$50,000+	
Renter occupied	1,065	72	31	130	637	113	2,048
Median contract rent	\$ 156	\$ 182	\$ 247	\$ 192	\$ 185	\$ 218	
Year-round vacancy	25	-	2	15	36	8	86
For sale only	3	-	1	7	5	3	19
For rent	18	-	-	4	23	4	49
Other	4	-	1	4	8	1	18
Total Vacancy Rate	1.4	0	.2	1.7	2.3	.8	1.2
For sale	.5	0	.1	.9	.6	.4	.4
For rent	1.7	0	0	3.1	3.6	3.5	2.4
Other	.2	0	.1	.4	.5	.1	.3

Source: U.S. Census of Housing, 1970.

TABLE 19
HOUSING VALUES AND COSTS - MILLBRAE 1970

CENSUS TRACTS

	<u>6044</u>	<u>6045</u>	<u>6046</u>	<u>6047</u>	<u>6048</u>	<u>6049</u>
<u>HOUSE VALUE</u>						
Owner Occupied Units	570	868	812	729	798	830
Less than \$9,999	3	-	-	1	-	-
Less than \$19,999	48	5	3	2	8	-
\$20,000 - \$24,999	171	53	7	23	52	5
\$25,000 - \$34,999	313	446	158	212	352	19
\$35,000 - \$49,999	32	319	505	334	343	278
\$50,000 or more	3	45	139	157	43	528
MEDIAN	<u>27,000</u>	<u>33,400</u>	<u>42,100</u>	<u>40,700</u>	<u>34,600</u>	<u>50,000+</u>
<u>CONTRACT RENT</u>						
Renter Occupied Units	1,065	72	31	130	637	113
Median	\$156	\$182	\$247	\$192	\$185	\$218

Source: U.S. Census of Housing, 1970.

The vacancy rate for rental units in Millbrae rose slightly over the 1960 figure to 2.9% in 1970. Continued apartment development has been largely responsible for maintaining this vacancy rate, although the market remains very tight and restrictive. A 5% vacancy rate is normally considered necessary to insure a good selection of rental housing. The County-wide figure in 1970 for available rental units was 5.2%. Millbrae's lower vacancy rate for rentals indicates the higher than average demand for rental units in Millbrae.

Current Problems

As was mentioned above, Millbrae has relatively few examples of deficient housing. A generalized impression of neighborhood conditions and housing quality is that Millbrae residents care a great deal about neighborhood upkeep and appearance. One rarely sees a home that is not maintained and well landscaped.

During the Environmental Quality Conference held in June, 1972, Millbrae citizens were able to articulate perceived problems concerned with housing and residential environment in the City. One issue of concern to the citizens was the availability of housing affordable by younger families, senior citizens and people currently unable to buy single-family homes in Millbrae. While people generally felt further extensive apartment development was undesirable, existing apartments and higher density condominiums offered a necessary alternative housing resource in Millbrae available to people not yet able to afford a single-family home or wishing to move into a smaller unit as children leave home. In addition, since the neighborhoods between the Freeway and El Camino constitute Millbrae's only real resource of moderate cost single-family homes, these neighborhoods should be conserved and upgraded to maintain this resource. Citizens felt that eventual deterioration of older areas of Millbrae was a potential problem area and preventative measures should be initiated.

While apartment development was considered undesirable west of El Camino, some areas between El Camino and the Southern Pacific railway tracks were considered appropriate for apartments. Private redevelopment of this area for apartments was considered a possible way of eliminating many of the substandard, older units.

A second major area of concern was the development of duplexes and triplexes into the R-2 zoned area around Chadbourne Street and Millbrae Avenue. While this higher density is permitted under the Zoning Ordinance, the result has been mainly development on small, substandard lots. It was felt that the single-family character of the area was being undermined by the permissive zoning. The area contains many retired citizens on fixed incomes who have difficulty maintaining their properties in the face of rising property taxes as a result of the higher assess valuation due to the zoning. Participants felt strongly that these higher density uses should be curtailed and that the single-family character of the area be preserved.

Recommended Actions

1. Establishment of a Special Stabilization District

The Zoning Ordinance can provide a useful tool for treatment of neighborhoods in need of selective rehabilitation or attention to land uses. A Stabilization District can facilitate neighborhood conservation and revitalization. It takes effect by the formation of a special planning area of one or several blocks designated for rehabilitative type measures. A procedure should be established whereby residents and property owners of the proposed Stabilization District can participate in the designation process. The proposed measures for the District should be in substantial accordance with the General Plan for the particular area under consideration. Once the District is established by the Planning Commission and concurred in by the City Council, the City can utilize special regulations pertaining to remodeling, offer flexible standards to facilitate rehabilitation and permit higher density only where conservation is inappropriate. The establishment of the Stabilization District changes the zoning and preempts the previous zoning category.

2. The present R-2 and R-3 zoning designations south of the Chadbourne Alley should be considered for Stabilization District zoning. The City feels the single-family character of the Millbrae Villa area should be preserved. One method to induce private maintenance of single-family homes in the area is to reaffirm the single-family nature of this neighborhood through rezoning of the area and development of rehabilitative and maintenance type programs for the area.
3. Selected areas east of El Camino also should be considered for Stabilization Zoning. Special attention to public facilities and services is necessary to induce adequate levels of private maintenance of properties.
4. The City should consider contracting with the County Building Department to provide voluntary inspection services to homeowners or landlords in Millbrae. Inspectors could be available in evenings or weekends to consult or advise homeowners on minor maintenance or remodeling techniques. The concept is that a program promulgated as being voluntary on the part of the homeowners, and as advisory rather than punitive, would foster good maintenance and conservation of housing so that blight and deterioration will not become a serious problem in the future.

NOISE

Introduction

Noise is simply unwanted sound. Noise may be defined as any sound that is regarded or treated as a nuisance to a reasonable person of normal sensitiveness. The degree of annoyance is not necessarily related to the intensity of sound or duration. Attitudes of mind and environment, familiarity and frequency are of major importance. Families who have lived for many years adjacent to a railroad line may not consider the periodic noise of the train as annoying as a new motorcyclist on the block. A noise which occurs once or twice an hour for a short period of time is much less objectionable than the same noise occurring 20 or 30 times an hour. Noise which occurs at night is more objectionable than the same noise occurring during daylight hours.

The growing public concern with noise pollution has resulted in demands for controls on the levels of sound produced by people, by trucks and transportation systems and by labor saving devices like motorized lawn mowers and saws. Cities themselves increase the level of unwanted noise as they provide services such as refuse collection, street cleaning, public works projects, etc.

By far the greatest contribution to unwanted noise in the City of Millbrae is the San Francisco International Airport. The California Department of Aeronautics is currently developing new noise standards and the San Mateo County Airport Land Use Commission is attempting to insure future compatible land uses in and around the Airport. Nevertheless, many years may pass before these noise controls achieve their desired results.

The State of California Government Code Title 7, Section 65302(g) as amended in 1971, authorizes and requires a Noise Element of all city and county general plans. In the context of the Public Resources Code, the State Legislature has declared it to be State policy to "take all necessary actions to provide the people of the State with freedom from excessive noise". In compliance with this intent, the City has two sets of alternatives: (1) to take measures to mitigate adverse effects of noise or to prevent increase in noise levels where such would be incompatible with existing or planned land use of (2) to adjust the land use pattern in relation to the noise levels.

Definition of Noise Related Terms

Sound intensity:	a measure of loudness of sound
Noise Contour:	a line (on a map) passing through parts where the same sound intensity prevails. Contours form bands of varying widths emanating from a noise source.
CNEL	"Community noise equivalent level" in decibels, represents the average daytime noise level during a 24 hour day, adjusted to an equivalent level to account for lower tolerance of people to noise during evening and night time periods.

Frequency: rapidity or slowness with which a sound source vibrates or makes the air vibrate expressed as cycles per second or hertz (HZ). The highest frequency a good human ear can hear is 20,000 HZ; frequencies above that are ultrasonic. The lowest it can hear is 15HZ; below that is infasonic range (Berland, 1970, p.5).

Decibel (db): the universally adopted unit for measuring sound intensity.

dBA: decibel expressed on the A weighting network of a general purpose sound level meter.

Sound Meter: measures sound levels in the field. The General Radio Type A was used for area measurements for residential, commercial and industrial areas in Millbrae.

Ambiant Noise level: the natural background noise level.

Scope of the Noise Element

The Noise Element is required by law to provide in quantitative, numerical terms showing contours (on a map) present and projected noise levels associated with all existing and proposed major transportation elements. The State, local or private agency responsible for the construction or maintenance of such transportation facilities shall provide a statement of the present and projected noise levels of the facility. Because of the recent inclusion of a noise element in the General Plan, and because some noise sources affect multiple communities, data cannot now be presented in the exact form required by law. However, all existing current noise level data from public agencies are presented.

Included in the Element will be a draft Noise Ordinance modeled on the League of California Cities sample and the Palo Alto Community Noise Ordinance giving recommended allowable noise levels for residential, commercial and industrial areas.

The Airport Land Use Commission (ALUC) operating under California Public Utilities Code (Division 9, Part 1, Chapter 4, Article 3.5) has the authority to determine planning boundaries, formulate a land use plan and hold public hearings for areas impacted by public airports. The City of Millbrae falls within the "Interim Airport Influence Area" of the San Francisco International Airport. The ALUC document, The Interim Airport Land Use Plan, provides current and projected noise levels and proposes measures which will mitigate the impact of jet noises on residential communities adjacent to the airport. The Land Use Plan, when adopted, will supercede other public agency activities and will strongly influence future land use development in the City of Millbrae since the "Zoning Authority will be required to submit zone changes within critical areas to the Committee for review". (Interim Land Use Plan, p.6) While Millbrae does not now have a connection with the Bay Area Rapid Transit System, the Policy Statement adopted by the Millbrae Planning Commission on June 25, 1973, states "Regional mass transit should be encouraged. Millbrae may be served by a carefully located station with adequate parking, however no marshalling

yard is anticipated within the City." BART sound level test data has been included in the Element in the event a station should be considered in the future for Millbrae.

Relationship to Other Elements and the General Plan

The Noise Element is closely related to the Circulation, Land Use and Housing Elements. Future or proposed transportation lines and increases in sound levels must be considered in relationship to existing residential uses. Noise level standards will influence the kind and location of industrial and commercial development. Where facilities exist, as with the San Francisco International Airport, noise level standards will determine the nature of land use adjacent to the Airport and can be used to prevent development of residential neighborhoods, schools and hospitals on land which will be impacted by aircraft takeoff and landing patterns.

The Noise Element also is related to the Open Space and Conservation Element since the tranquility of out-of-door recreation can be shattered by high noise levels. Open space areas can be used with some success as barriers between unwanted noise sources and other land uses if proper measures such as intensive tree planting or land mounds are used.

Policy Statement and Goals

While the Millbrae Policy Statement of June, 1973, does not expressly state desires as to noise levels, certain other statements relevant to the quality of life of the City implicitly indicate a desire to maintain a stable, tranquil community of predominantly single-family dwellings. In order to preserve the present conditions, and insure that the natural increases in service and technology do not unwittingly disturb the quality of life in the City, certain considerations about noise should be kept in mind. Theodore Berland in his book The Fight for Quiet states that "Whether noise annoys or not depends mostly upon what it means to us, when it is heard and the mood of the hearer". The most annoying sounds according to Berland are:

- . Loud - the louder the noise, the more annoying it is.
- . High pitched - upwards of 1,500 Hz.
- . Intermittent and irregular - the more randomly the noise occurs, the more annoying it is.
- . Produced from a hidden or moving source - the more uncertain you are about where the noise is coming from, the more annoying it is.
- . Inappropriate to your own activities - we seldom object to noise we make.
- . Unexpected - noise like sonic booms can startle.

INTERIM AIRPORT LAND USE PLAN
SAN FRANCISCO AIRPORT PLAN AREA
SAN MATEO COUNTY AIRPORT LAND USE COMMISSION

Generalized Land Use	CNEL Range	General Land Use Recommendation
Residential & Educational	Less than 65	Satisfactory, with little noise impact and requiring no special noise insulation requirements for new construction.
	65 to 70	New construction or development should be undertaken only after an analysis of noise reduction requirements is made and needed noise insulation features included in the design.
	Greater than 70	New construction or development should not be undertaken.**
Commercial	Less than 70	Satisfactory, with little noise impact and requiring no special noise insulation requirements for new construction.
	70 to 80	New construction or development should be undertaken only after an analysis of noise reduction requirements is made and needed noise insulation features included in the design.
	Greater than 80	New construction or development should not be undertaken unless related to airport activities or services. Conventional construction will generally be inadequate and special noise insulation features should be included in construction.
Industrial	Less than 75	Satisfactory, with little noise impact and requiring no special noise insulation requirements for new construction.
	75 to 85	New construction or development should be undertaken only after an analysis of noise reduction requirements is made and needed noise insulation features included in construction.
	Greater than 85	New construction or development should not be undertaken unless related to airport activities or services. Conventional construction will generally be inadequate and special noise insulation features should be included in construction.
	Less than 75	Satisfactory, with little noise impact and requiring no special noise insulation requirements for new construction.
	Greater than 75	Land uses involving concentrations of people (spectator sports and some recreational facilities) or of animals (livestock farming and animal breeding) should generally be avoided.

** Infill of already developed areas will be permitted. In such cases, a detailed analysis of noise reduction requirements will be made and needed noise insulation features (sufficient to reduce the intrusion of airborne noise to no greater than 45 db) will be included in the building design. (CNEL - Community Noise Equivalent Level.)

The physical and psychological effects of noise have long been realized. Noise produces psychological effects of fear and annoyance. It interferes with work, sleep and outdoor recreation. It also interrupts speech and communication and may cause hearing loss (either temporary or permanent) and other bodily harm such as loss of muscular control and blurring of vision.

A few cities have not accepted increased noise levels as unpleasant but as inevitable conditions of growth and urban development. The City of Minneapolis, Minnesota, for example, has a large scale program of noise regulation based upon: noise ordinances, zoning codes, public nuisance actions, licensing permits and building code requirements. Memphis, Tennessee, handles its community noise problems by a people-oriented campaign of education, press articles and public relations efforts ("Quiet City Report" - League of Cities, 1970). The City of Palo Alto, California, undertook a six-month study of noise and its sources which culminated in a Palo Alto Community Noise Ordinance which is intended to "gradually but effectively reduce the disturbing and objectionable noises in the community by consistently focusing upon the abatement of the worst sources". The Palo Alto Ordinance sets allowable standards in decibels which take into consideration desirable or "ideal" noise levels and the practical limits imposed by presently available abatement sources.

The City of Millbrae than has dual goals; to reduce internally produced noise in residential areas to levels not to exceed 55 dBA at night and 65 dBA by day; and to work with neighboring cities and other agencies in seeking relief from the harmful impact of jet aircraft noise.

Major Noise Sources

The Airport

The major environmental noise problem for the City of Millbrae is the San Francisco International Airport. While extensive research has been done on reducing jet noises, the tremendous costs involved in conversion to quieter engines or relocation of families preempt any simple solution in the near future.

The neighborhoods of Bayside Manor and Marina Vista are among areas most affected by jet takeoff and landing noise. A 1960 report on the effect of the jet noise problem at Bayside Manor estimated that a suitable aerodynamic baffle could be constructed at a cost of \$100,000. In 1972, the Preliminary Airport Vicinity Development Plan investigated the possibility of relocation as a solution to the noise disturbance problem with subsequent reuse of the land for industrial purposes. Cost estimates for land acquisition would be

\$18,900,000 (exclusive of administrative expenses, cost for relocation of residents, etc.). This land would cost \$7.68 per square foot, substantially higher than the cost of comparable industrial land in the vicinity, not to mention the problem of finding suitable relocation sites for some 700 families in comparable neighborhoods on the Peninsula. The report concluded, "Even if it is argued that Airport noise makes living in these two subdivisions intolerable and they should be ultimately redeveloped, it must be recognized that the dwellings are sound, well landscaped and likely to remain for many years". The residents themselves as determined by interviews, do not wish to be forced to relocate.

The League of California Cities, and other authoritative evaluators of the problems of cities adjacent to airports, offer the opinion that "those involved in creating the noise problem should finance the solution". To date, no local, federal or State program has been enacted of a magnitude to deal with the problem.

Some degree of the severity of the problem may be seen in the Airport Contour Map on the preceding page. A single example may be found in the noise test taken in January of 1973 by the Department of Transportation at the Lerida Avenue Playground in the Bayside Manor neighborhood. The average peak noise level was 90dBA due to jet takeoff. Acceptable open area noise levels, according to the Airport Land Use Plan, is a community noise equivalent level (CNEL) value of 65 dBA, substantially below the levels the Lomita Park School and City Corp Yard are constantly subjected to. Additional data on the impact of airport noise may be seen in Table 20.

Highways and Freeways

The City of Millbrae has three major north-south transportation routes. The Junipero Serra Freeway (Route 280), El Camino Real and the Bayshore Freeway (Route 101). In addition there is a system of internal streets and roads which facilitate movement in and around the City. Except for the airport, motor vehicles are the largest contributors to increases in background or ambient noise levels. Noise from motor vehicles is determined by the type of vehicle (diesel truck or automobile), distance from the source, volume of traffic, average speed of vehicles on the street and the number of starts and stops caused by traffic lights.

The State Department of Transportation is required by law to furnish noise level contour maps to local cities and counties. This information, while not now available, will be forwarded to the City of Millbrae upon its completion. Noise level tests were taken by the consultant, using a General Radio Company Sound Level Meter type 1656-A, at designated locations throughout the City.

Route 280 Test Site

The test was conducted on August 4, 1973, at the corner of La Prenda and Hillcrest, in an area zoned R-1. The site is approximately 290 feet from Route 280 and has an approximate 20% grade. The ambient noise level was measured as 61 dBA. At 10:35 to 10:50 a.m., the average peak noise level was 76 dBA from highway traffic and jet aircraft. Peak noise emissions occurring approximately 48 times per hour. Test results from evening readings on August 2, 1973, 8:20 to 8:35 p.m., at the same location, showed an average peak reading of 63 dBA, with a frequency of 15 peak emissions per hour generated by the same noise sources.

El Camino Real Test Site

The test site on El Camino Real was at the corner of El Camino and Meadow Glen with the test meter approximate five feet above the ground level. Ambient sound level readings were 62 dBA with an average peak level of 80 dBA caused by jet noises and motor vehicles. There was a constant flow of traffic with frequent starts and stops for right and left turns. Test time was 15 minutes; 1:20 to 1:35 p.m.

Bayshore Freeway Test Site

The test site was at the corner of Aviator Avenue and Garden Lane. The site was approximately 590 ± feet from Route 101. Jet aircraft could be seen across the freeway in a holding pattern prior to takeoff. The background noise level (ambient sound) was 65 dBA - time 11:30 to 11:45 a.m. The average peak noise level was 80 dBA caused by jet aircraft and truck traffic occurring as a constant din. The test results for evening readings on August 2, 1973 - time 9:15 to 9:30 p.m. at the same location was 68 dBA ambient noise level with an average peak of 79 dBA occurring less frequently than during the daylight hours.

Open Space Test Site

A playground located at Hazel and Laurel Avenues, in an area zoned R-1, showed ambient noise level of 54 dBA during the daytime test period 11:00 to 11:15 a.m., with an average peak noise level of 72 dBA from aircraft noises.

Future Rapid Transit System Noise Impact

"The San Francisco Airport Access Project", a study executed through a joint powers agreement between the City of San Francisco, San Mateo County and the Bay Area Rapid Transit District, recommended an extension of BART from Daly City to the Airport, and beyond to Burlingame. The recommended alignment includes a station just north of Millbrae Avenue. A second location near the railroad station has been considered as a possible station site but was not studied in detail in the Access Project Study. Either site could be above ground and in a commercial area adjacent to residential areas.

TABLE 20

TYPICAL NOISE MEASUREMENTS FOR THE CITY OF MILLBRAE, 1973

Location	Background (Ambient Noise Level)		Noise **Day	Peak Range*		Mean Day	Peak Value	Noise Peak Source		
	Day	Eve			Eve					
Residential Near Freeway	61	dBA	52	74-82	dBA	64-68	78	dBA	66	Motor Vehicles, Jet Aircraft
Residential Midtown	52		52	65-86		62-82	72		66	Motor Vehicles, Jet Aircraft
Commercial	62			72-75			74			Motor Vehicles, Jet Aircraft
Industrial	65		62	77-86		74-84	80		75	Jet Aircraft, Truck & Other Motor Vehicles
Recreational	54			66-79			70			Jet Aircraft
Single Event Residential	55			70-82			80			Power Lawn Mower

* Test period = 15 minutes per site

**74 dBA is approximately 65 CNEL; Community Noise Level is the level of noise defined by California law as acceptable to a reasonable person residing in the vicinity of an airport.

D = Day, 7:00 a.m. to 6:00 p.m.

E = Evening, 6:00 p.m. to 11:00 p.m.

N = Night, 11:00 p.m. to 7:00 a.m. - no reading taken during these hours.

A mass transit system would represent a new noise source to the community and the acceptable noise level might be expected to be less than for older rail systems whose sounds have become familiar to the residents. A positive advantage of a mass transit system would be the decrease in automobile traffic noise.

Tests by BART have shown that noise and vibration from trains can be successfully muffled by careful selection of route, construction of sound barriers and distance from residences. Maximum acceptable noise levels should not exceed 70 + dBA in any area. While these levels are high compared to ideal acceptable noise levels of 50-60 dBA for residential areas they are within acceptable commercial area noise levels of 80-85 decibels on the A weighting scale (dBA). The following tables prepared by Wilson, Ihrig and Associates Inc., acoustical consultants, give a comparison of freeway traffic and rapid transit noise levels.

Noise Abatement Recommendations

1. The City of Millbrae should adopt a Noise Ordinance which sets allowable noise limits for residential, commercial and industrial areas.
2. Review existing ordinances which relate to noise compatibility relating to the above.
3. The City should review its own service activities to make sure that noises from construction, refuse collection and street sweeping have been reduced to the lowest possible level.
4. The City should continue aggressive enforcement of the Motor Vehicle Code as it applies to excessive noise and further, should encourage high schools to promulgate noise control as part of driver education.
5. The City should review and reevaluate its traffic flow systems to synchronize signalization to avoid traffic stops which produce excessive noise, and to adjust traffic flow to achieve noise levels acceptable to surrounding areas.
6. The City should incorporate noise standards in zoning ordinances which are consistent with the Interim Airport Land Use Plan recommendations.
7. The City should adopt building codes which require adequate sound insulation, depending upon distance from the Airport, for all new construction.
8. The City should develop a noise enforcement and regulation education program and consider assigning a staff member as the enforcing officer.
9. The City should cooperate with adjacent impacted cities and work with the Airport Land Use Committee in establishing airport use patterns which are least impacting on residential areas.
10. The City of Millbrae should request that all noise data and contour mapping for highways and freeways, as required by law, be assembled by the San Mateo County Planning Department for use of individual cities.

11. The City of Millbrae should encourage the Airport and the FAA and other state and federal agencies to utilize all operative controls under their jurisdiction to reduce aircraft noise levels.
12. Flight patterns and altitudes near the airport should be arranged to avoid unnecessary flights over populated areas and to minimize take-off patterns which have the greatest detrimental effect on the City.
13. Noise levels should be monitored by the Airport Land Use Committee to determine the effectiveness of remedial practices. This information should be requested and reviewed by the City on a periodic basis to insure conformance with State law requiring reduction of 15 dBA by 1985.

TABLE 21

Freeway Traffic and Transit Train Noise Levels

Distance from Pavenment Edge or from Track Centerline

	<u>50 feet</u>	<u>100 feet</u>	<u>200 feet</u>
Freeway Traffic			
Autos Only	72-82 dBA	67-77 dBA	63-73 dBA
With Trucks	80-90	76-86	70-80
Transit Vehicles			
Single Car			
80 MPH	82-84	77-79	71-73
60 MPH	78-80	73-75	67-69
2-Car Train			
80 MPH	84-86	80-82	74-76
60 MPH	80-82	76-78	70-72
6-8 Car Train			
80 MPH	86-88	83-85	78-80
60 MPH	82-84	79-81	74-76

TABLE 22

Typical Noise Levels Encountered in Transit Corridor Communities

<u>Noise Source</u>	<u>Noise Level - dBA</u>
Motor Buses Observed on Boulevard Sidewalk	80-90
Trucks and Buses Observed at Residential Area Setback Lines	75-85
Autos on Busy Boulevard Observed at Residential Area Setback Lines	70-75
Residential Area Auto Traffic Observed at Setback Lines	60-70
Single Vehicles Observed at About 50 ft. from Lane of Travel	
Motor Buses on City Streets	80-88
Gasoline Trucks: 55 MPH	78-88
25-35 MPH	70-80
Diesel Trucks: 55 MPH	84-92
25-35 MPH	80-88
Automobiles: 55-65 MPH	75-82
25-35 MPH	80-70

SAFETY

Purpose of the Element

The purpose of the Safety Element is to concisely identify and evaluate Millbrae's local fire, flood and geological hazards, and to define the City's general responsibilities and policies regarding the safety of its citizens from such hazards. It thereby establishes, implicitly, what the City considers to be "acceptable and unacceptable levels of risk" in respect to each of these hazards. As used in the context of this Element, these terms are defined as follows:

Acceptable risk: the level of risk below which no specific action by government is deemed to be necessary:

Unacceptable risk: the level of risk above which specific action by government is deemed necessary to protect life and property.

The Safety Element is directed at reducing loss of life, injuries, damage to property (including the developed and natural environment) and economic and social dislocation which may result from a major disaster.

Section 65302.1 of the California State Planning Law mandates "a safety element for the protection of the community from fires and geologic hazards including features necessary for such protection as evacuation structures, and geologic hazard mapping in areas of known geologic hazard". Seismic or earthquake hazards are specific geologic hazards which are dealt with separately in the Seismic Safety Element of the General Plan.

In addition to local analysis of the above subjects, this Element considers the hazard of serious flooding in Millbrae and recommends measures which should be taken to reduce that hazard. The Element also briefly discusses the need for a municipal Emergency Plan which would complement the document recently prepared and adopted at the County level. It is not within the scope of the Safety Element, however, to satisfy the requirements of such a municipal emergency plan.

It should be realized that there is a broad spectrum of potential hazards to the general safety of Millbrae residents that this Safety Element does not begin to treat. This would include events of nuclear attack and radiation contamination, civil disturbance, violent crime, epidemic, severe air or water pollution, and even critical traffic hazards. The two latter subjects are discussed, respectively, in the Conservation and Circulation Elements.

Policies

The City of Millbrae fully recognizes its responsibility to protect its citizenry and visitor population from undue hazards of fire, flood and geology; and is cognizant of the potential dangers said hazards pose to life and property; and realizes the importance of establishing precautionary measures and specific policies to mitigate these hazards. The following is intended to clarify the City's general commitment to public safety.

1. The City shall keep its citizenry informed as to the current nature and extent of local safety hazards.
2. The City shall immediately begin preparing a municipal "emergency preparedness plan".
3. The City shall continue to make necessary capital improvements to maintain "an acceptable level of risk" throughout the community.
4. The City shall continue to maintain a fire department adequate in manpower, equipment and resources to respond to any fire or other localized emergency within the City.
5. The City shall maintain its "mutual aid agreement" with neighboring cities to insure adequate response to large scale emergencies which exceed the capabilities of local resources.
6. The City shall prohibit development which would be subject to severe flood damage due to its location and/or design.
7. The City shall adopt ordinances as necessary to insure safe development in areas of known flood or geological hazard.
8. Investigate the desirability of improved lighting for traffic safety and crime prevention.
9. The City shall use this Element as guidance in the preparation and revision of local ordinances.

Identification and Evaluation of Local Fire Hazards

Like most communities, Millbrae is confronted with a variety of fire hazards stemming from different sources in developed and undeveloped parts of the City. The following is a brief discussion assessing the general level of risk each of these hazards represents.

Undeveloped Hill Areas

About 10% of the City remains as undeveloped, vacant land. The Spur property and other private lands adjacent to or directly west of the Spur property account for a large proportion of Millbrae's total undeveloped acreage. In addition, there are substantial areas of essentially undeveloped land running behind and between many houses built on large, sloping lots.

The landscape varies in these undeveloped hillside areas from grassland and dry chaparral to larger woodland; a few slopes, however, have become bare from erosion and are now without any plant cover. Most of these areas are quite steep and inaccessible other than by foot. (Several properties have not been subdivided only because of their excessive slope and poor access.)

Ground fires have occasionally broken out in these vacant areas, although the scale of these fires usually has been kept small, never damaging development. Yet, the threat of wildfire remains an ever-present danger here. The high fuel content of the vegetation, the steep terrain, moderately high wind speeds, and the low humidity during the hot summer months may all contribute to the rapid spread of potential fires. City ordinance now requires that all developed and undeveloped property be kept free of any dry weeds, dry grass, or other flammable vegetation more than three inches in height and within 10 feet of any building, fence or other combustible material. Properties which, in the Fire Chief's opinion, constitute a fire hazard are notified by the Department to abate such hazard.

The City and County of San Francisco owns and manages extensive watershed lands just west of Skyline Boulevard. These too, are heavily vegetated and subject to wildfires, especially during the summer. It is considered unlikely, however, that any fire in this area would leap over the ridge (and highway) to threaten development in Millbrae. Protection of these watersheds is the responsibility of San Francisco and San Mateo County.

Structural Hazards

The City of Millbrae has employed modern building and fire codes in the construction of most of its residential and commercial structures. An exception to this might be some of the older stores and apartment flats in the central business district. The Civic Center complex and all elementary and high schools have been built in the last 10 years, indicating that they should be in conformance with accepted fire protection requirements of high-occupancy public buildings.

Based on a recent structural condition survey of residential buildings in Millbrae (see Housing Element), it appears that only about 20 houses can be considered to be in substandard condition. Generally, they are older wood-sided single-family structures located east of El Camino Real. Many are seriously dilapidated with badly overgrown yards. These characteristics are often found in combination with defective electrical wiring and/or faulty gas lines and may represent a potential fire hazard to neighborhoods in which these structures are located.

Industrial Hazards

Manufacturing Uses: Millbrae has very few manufacturing uses at this time. All have been confined (by way of City zoning and access requirements) to the Millsdale Industrial Park located in a rather isolated part of the City south of Millbrae Avenue and east of the Southern Pacific Railroad tracks. This area is contiguous on the south with Burlingame industry and fairly well buffered on all other sides from nonindustrial development in Millbrae.

No local industry constitutes a fire or explosion hazard. The City's municipal Code strictly regulates the storage of flammable and combustible liquids. Similarly, the Code restricts bulk storage of liquefied petroleum gases and absolutely prohibits the manufacturing or storage of explosives and blasting agents.

Public Utilities: The PG&E substation, located south of Bayside Manor, receives high voltage electricity from outside sources and transmits it incrementally to users in Millbrae. Easements have been reserved beneath each of the main transmission lines to preclude physical development. In other cases, public streets have been selected as easements. This has eliminated two hazards: the possibility of live transmission lines falling onto buildings, and fires from such buildings possibly damaging the transmission lines.

Telephone and power lines have been undergrounded in the newer subdivisions and portions of the central business district. Those which remain overhead are not considered to be unduly hazardous. The delivery of natural gas to users throughout Millbrae has never caused any difficulty and is presumed to be safe under normal conditions. No regional pipelines pass through the City.

Millbrae will always be vulnerable to severe earthquakes originating within the immediate vicinity (see Seismic Safety Element). In the event of a large magnitude earthquake, utility lines may be severed and subsequent fires can be expected.

San Francisco International Airport: The close proximity of the San Francisco International Airport will always pose a degree of hazard to Millbrae residents. The present runway system has most aircraft normally taking off and approaching the airport over the Bay. About 10% of all takeoffs and approaches are over the Peninsula, northwest of Millbrae. The only significant hazard to Millbrae arises when planes occasionally approach the airport from the northeast, landing on one of two runways perpendicular to the Bayshore Freeway.

Opposite these runways, a six acre parcel of land (between the Freeway and Aviador Avenue) has been placed in a "clear zone" to restrict development and, thus, minimize damage should a plane overshoot the airport.

Firefighting Resources

The Millbrae City Fire Department is capable of responding adequately to fire calls throughout the City. Definite handicaps do exist, however, which limit the Department's effectiveness in certain parts of the City and with certain types of emergencies.

Department Manpower and Equipment

Millbrae's Fire Department has recently been evaluated by the Insurance Services Office, an independent nationwide organization. Based on a grading scale from one to 10 (where one is the highest grade possible) Millbrae was given a "five" but was very close to a "four". The rating is based on a composite of water, manpower capability and structural conditions.

If an emergency situation should require resources beyond those at hand, Millbrae is able to call upon the manpower and firefighting equipment of adjacent cities. This can be done under the provisions of a "mutual aid agreement".

Water Supply

The Insurance Services Office has separately evaluated the City's emergency water supply. The City has been given a "two" (again based on an inverse scale ranging from one to 10), indicating that Millbrae is judged to have a very good water supply. Items considered in this rating included: reliability of the water supply with and without electrical power, reliability of the water mains, and the distribution and pumping capacity of hydrants.

This supply, however, could be cut off if water mains are broken by a severe earthquake. In this event, the Fire Department expects to draw upon standing sources of water such as swimming pools and nearby reservoirs which it has inventoried. If these sources are also seriously damaged, water would then have to be trucked in or airlifted from unaffected areas elsewhere in the region. This contingency should be provided for in the City's Emergency Preparedness Plan.

Emergency Circulation and Access

The street system in Millbrae is not laid out to facilitate convenient Fire Department response to all parts of the City. Whereas the downtown area has an apparent overabundance of north/south oriented through streets, the upper elevations of the City have none. Unfortunately, this requires the Fire Department to take very indirect routes when responding to emergencies in these higher areas. This inevitably adds to the time it takes the Department to arrive at a fire site. Consideration might be given to making provisions for emergency access along parts of the Spur property. This would greatly facilitate traffic headed into and away from hillside emergency scenes, especially if major intersections in the area become blocked.

Several cul-de-sac streets in the City exceed the commonly accepted fire safety length of 500 feet. No neighborhood, however, is without an alternative means of access.

Subdivisions located east of the Southern Pacific Railroad tracks have, by far, the most serious access deficiencies in the City. Normal means of ingress and egress are the grade crossing at Spruce Street and Aviador Avenue. Should these streets be blocked, emergency access to each subdivision is available, from the railroad right-of-way. In any case, a stalled train might effectively cut off this area from emergency resources of the City.

Recommendations to Reduce Fire Hazards

1. Identify and inspect all buildings and vacant lands which are in violation of the Municipal and Uniform Fire Codes. Secure all vacant buildings.
2. Enforce the prompt abatement of identified fire hazards.
3. Maintain a second means of emergency ingress and egress in all development. Do not permit new cul-de-sacs in excess of 500 feet in length.
4. Maintain Spur property landscaping so as to minimize the seasonal fire hazard. Provide emergency access at critical points along the Spur.
5. Need for a second fire station on City-owned property located on Crestview Drive should be determined.
6. Incorporate the provisions of the "Fire Service Annex" into an overall City Emergency Plan.
7. Institute a regular inspection program to identify and correct potential fire hazards.

Local Flood Hazards

Millbrae is able to handle normal amounts of water runoff without difficulty. During the winter months, however, hard and continuous rainfall often overloads the City's flood control system. Although any damage is usually slight, more serious problems are possible during 100-year floods or in the event of a severe earthquake.

Storm Flooding Experience

Early subdivision development in the lower elevations of Millbrae established significant constraints upon the flood control system which remain today throughout much of the City. At that time, many natural drainage channels were either severely reduced in size or enclosed in underground conduits. Construction of these drainage channels has effectively limited the quantity of water that can be moved through the City to the Bay.

Conduit capacities in several locations have proven insufficient to carry heavy water flows in the winter, forcing creeks to back up and overflow their banks. Sedimentation and debris collection during storms has often further limited capacities. Compounding this problem is the fact that many residential tracts in the steeper parts of the City also encroach upon natural creekbeds and their floodplains. The same is true of many street and access roads. The inevitable result is that at least eight streets or intersections in the City are ponded from one to three times a year. These are:

Millbrae Avenue at Popular Avenue
Helen Drive at Michael Lane
Helen Drive at Tioga Drive

Anita Lane

Broadway at Taylor Boulevard
Park Boulevard at Santa Teressa
Park Boulevard, Park Place, El
Camino Real
Landing Lane

The capacities of the conduits which carry runoff water under the Southern Pacific Railroad tracks and Bayshore Freeway are sufficient for moderate storms. During extreme storms, however, flows occasionally exceed capacities to form ponds west of the Freeway and the railroad tracks. This low lying area of the City remains, in effect, a huge flood basin. Unfortunately, the high banks of High-Line and El Portal Canals do not permit proper drainage of these ponds; consequently, existing and potential development in the area is subject to flood inundation.

Storm Flooding Potential

Flooding in Millbrae has generally been confined to those areas already described; however, recent flood insurance study for Millbrae, prepared for the Federal Insurance Administration, indicates that the potential exists for more widespread and severe flooding. Providing for the 100-year flood event is now generally considered the design standard for municipal flood control systems.

Analysis indicates that all three streams (Lomita Creek, Green Hills Creek and Millbrae Creek) can satisfactorily carry runoff waters from a 100-year flood event except at places where their channels are artificially constricted by culverts or bridges. A 100-year flood event would also amplify existing problems at the point where streams transfer their volumes of water into an undersized system of conduits. It is anticipated that a flood of this magnitude would overflow stream banks and flood adjacent land on either side.

Much of the area east of El Camino Real is also subject to damage by the 100-year flood event because of topography and ponding characteristics previously referred to. Fortunately, both of the canals leading out to the Bay have capacities in excess of the inlets and pumps dumping into them; there exists no possibility for overflows into adjoining lands. The simultaneous occurrence of an annual high tide and maximum canal flood flows is considered extremely unlikely.

Tidal Flooding

Millbrae is generally protected from tidal flooding by the higher ground along Old Bayshore Highway on the east and the high banks of El Portal Canal on the south. This leaves just the City's waterfront land east of Old Bayshore Highway possibly subject to tidal flooding. This analysis is predicted on a base-flood (100-year tide) elevation in Millbrae of 6.5 feet above mean sea level.

Defective Water Mains

Millbrae receives part of its domestic water supply from San Francisco through large mains which run under El Camino Real. At least one of these mains has become defective over the years and now requires periodic repair. Much of its length remains in poor condition, subject to future leaking and possible rupture.

Ground shaking caused by a severe earthquake in the Millbrae vicinity could very likely break any defective mains to seriously flood El Camino Real and the properties fronting it. Should the City be badly damaged by an earthquake, El Camino Real would normally be a primary evacuation route out of Millbrae and leading to the Freeway. It would also be an important means of access into the damaged area for the Fire Department, ambulances and other relief efforts.

Water main leaks have also demanded attention near the intersection of Larkspur and Helen Drives. Both of these streets would normally be heavy carriers of traffic in the event of an emergency. Ironically, this defective main lies immediately west of the Serra Fault and could very likely be ruptured by even moderate seismic activity.

Recommendations to Reduce Flood Hazards

1. Adopt and map a "floodways zone" (in accordance with the Cobey-Alquist Floodplain Management Act) to regulate new development in areas critical to flood control or known to be flood hazards. This should also govern any adjustments to the City's circulation system.
2. Reclaim natural or, at least, modified floodplains as creekside lands become available.
3. Regularly maintain all creekbeds and conduits to minimize problems stemming from their erosion.

4. Program improvements to drainage channels, hydraulic pumps and conduits responsible for chronic flooding problems.
5. Require property owners to relandscape steep sites or otherwise control hazardous runoff.
6. Program the replacement of defective City water mains which are determined to be serious flood hazards. Encourage the San Francisco Water Department to do likewise with its mains in Millbrae.

Local Geologic Hazards

Two basic types of geologic hazards exist in Millbrae--that of surface soil instability, and that related to seismic activity. The latter subject is considered separately in the Seismic Safety Element. Thus, the following discussion is limited to the problems associated with unstable soils in Millbrae, landslides and erosion.

The information contained in this section is based largely on recent but generalized data provided by the U.S. Geological Survey; as such, it should be regarded as subject to refinement or modification whenever more detailed information becomes available.

Landslide Susceptibility

Most of the steeper developed and undeveloped lands west of the Spuh property have been identified as having either "moderate" or "highest" susceptibility to landsliding (from field surveys and photo-interpretation). Landslide susceptibility is basically determined by previous slide activity, slope and soil composition. Those areas identified as having the highest susceptibility generally coincide with known or assumed landslide deposits. Factors which may speed up erosion or landsliding include ground shaking from seismic activity, rainfall, subsurface water seepage, and improper site drainage; insensitive grading for streets and houses; and vegetation removal.

As yet, no close association has been observed in San Mateo County between active faults and the occurrence of landslide deposits. Nevertheless, Millbrae should definitely consider the landslide hazard in its hill areas increased by the presence of the San Andreas and Serra Faults. (See Seismic Safety Element.) The higher elevations of Millbrae are predominantly composed of sandstone, siltstone, and claystone with some deposits of shale and other sheared rock. It is generally where this sheared rock is found in combination with very steep slopes (many in excess of 50%) that landslides have most frequently occurred.

Some of the largest landslide deposits in the City were formed prior to development in Millbrae. Consequently, parts of several subdivisions are now located on old deposits thought to measure 500 to 1,000 feet in breadth.

Hazards to Development

Residential development in Millbrae's hill areas has often failed to recognize or deal with inherent hazards of the site. In many cases, cut and fill grading left bare, loosely compacted slopes exposed to the weathering process. Over the years, this has caused increasing problems of soil erosion and landsliding. Several homes in the extreme southern part of the City (along Valencia and Conejo Drives) have recently suffered severe damages triggered by intense rainfall. Other home sites have also experienced serious erosion and mudslides, although damage has not yet been as severe. Erosion and/or slides have usually occurred in backyard areas where steep slopes have not been planted and adequate drainage has not been provided. Soil has slipped down into streets or home sites below, leaving the slope rutted and raw. Many homes are also vulnerable to slides which occasionally originate on undeveloped land.

Some homeowners who have experienced such problems in the past have taken precautions to avoid them in the future. Their efforts include planting along slopes, modified drainage systems, retaining walls, and temporary slope coverings.

Recommendations to Reduce Geologic Hazards

The following recommendations serve to supplement or reiterate recommendations set forth in the Seismic Safety Element.

1. Once identified, all areas having unstable soil conditions should be inventoried and monitored.
2. The City's subdivision ordinance, grading ordinance and building code should recognize land generally west of the Spur property as potentially hazardous to development. These documents should be amended to require detailed geologic site studies for all new development and site alterations in this part of the City. Studies should evaluate development risk and determine the engineering precautions necessary to satisfactorily mitigate any risk. Based on the findings of these studies and any other necessary input, the City should decide whether a particular site can or cannot be developed without "unacceptable" risk to that site or surrounding development.
3. The local building code should adopt special construction standards to insure the safety of new development on Bay fill against the effects of liquefaction and/or subsidence (see Seismic Safety Element).
4. Builders should be required to reforest or otherwise landscape steep sites left bare and fragile by excavation. The City should provide information regarding appropriate plant species.

Emergency Evacuation Routes

Should a fire or other emergency extend beyond control to the point where lives may seriously be threatened, the entire City or parts of the City may be directed to leave their homes and take refuge elsewhere. At such time, citizens should know which streets would provide them with the most expedient route out of the City. (In many cases, evacuation routes would remain two-way thoroughfares to accommodate relief efforts rushing to the disaster scene.)

Downtown Vicinity

People living or working in the downtown area between the Spur property and the railroad tracks have the most direct access to routes leading away from the City. Circulation in this area is simplified by a general gridiron street pattern which funnels traffic down to El Camino Real and Bayshore Freeway. Both of these routes have very high traffic capacities and continue north and south out of town. If the Millbrae Avenue freeway on-ramp were damaged, on-ramps in San Bruno and Burlingame should be used as alternatives. Temporary refuge might be established across the Freeway, at San Francisco International Airport.

Hillside Areas.

For many people living west of the Spur property, Highway 280 will be their most accessible major evacuation route. On-ramps are at Hillcrest Boulevard and Larkspur Avenue. Principle east-west collector streets leading to El Camino Real and the two freeways include (from north to south) Lomita Avenue, Helen Drive, Richmond Drive, Hillcrest Boulevard, Millbrae Avenue and Murchison Drive.

Area East of Southern Pacific Tracks

As pointed out in a previous section, the two subdivisions located east of the Southern Pacific Railroad tracks suffer from poor access. Conversely, this will also handicap evacuation, from an area characterized by flood and geologic hazards. To improve normal and emergency circulation in this area, the City may consider extending Bay Street south to intersect with Lerida Avenue and Roblar Avenue.

Emergency Preparedness Plan

A fundamental responsibility of civil government is the protection of life and property and the alleviation of suffering and hardship when disaster strikes. The City of Millbrae has accepted this responsibility in principle but still requires a locally adopted and implemented plan of action to insure effective and efficient response in emergency situations.

The function of the Emergency Preparedness Plan should be to anticipate the different wartime and peacetime emergencies which may conceivably befall the community; to organize the City's staff by assigning each public office and department specific emergency responsibilities; to establish a coordination for recovery efforts with other City and County jurisdictions.

The Millbrae Fire Department has already prepared a service annex which quite thoroughly specifies the procedures to be followed by the Department in responding to local emergencies or disasters. This annex should eventually become a supplement to the City's basic emergency plan document.

To aid communities in their preparation of a local plan, the California Office of Emergency Services has published a document entitled "Guidance for the Development of a City Emergency Plan". The basic subject outline presented in that document is included in the Appendix.

SEISMIC SAFETY

The Seismic Safety Element is intended to present a concise identification and evaluation of seismic hazards in Millbrae, together with the City's official policy for the reduction or abatement of these hazards. The ultimate purpose of the Element is to reduce loss of life, injuries, damage to property and economic and social dislocation resulting from future earthquakes.

Data Source

The findings and recommendations of this Element are based on information made available to date by the United States Geological Survey, U.S. Department of the Interior. This information included:

- . Analysis of active and inactive faults and their potential for creating seismic disturbances.
- . Analysis of soil conditions with special regard to their susceptibility to landslides, subsidence and liquefaction.
- . Projection of development constraints imposed by various seismic hazards.

Policies

The City of Millbrae fully recognizes the potential danger local seismic conditions pose to life and property and the importance of establishing precautionary measures to reduce the hazard and to minimize losses in the event of seismic activity. The following represents the City's general policy toward seismic safety:

1. The personal safety of all residents should take precedent over the survivability of structures.
2. High-occupancy structures, such as schools and office buildings, should be designed or redesigned to protect human life to the highest degree possible during the "maximum probable event" of seismic activity.
3. The structures designated for local command control of emergency/disaster services should be designed or redesigned to withstand a "maximum probable event" and remain operational.
4. An "emergency preparedness" or "contingency plan" which specifically includes earthquakes should be immediately prepared and adopted. (See Appendix 1 and refer to the Safety Element.)
5. The specific policies included in this Element should be used as guidance in the preparation and revision of local ordinances.

Identification and Appraisal of Local Seismic Faults

Millbrae has four seismic faults within its immediate vicinity, two of which actually penetrate the City's boundaries. (See Seismic Fault Location Map.) In addition, two other faults located in the Bay Area have the potential for regional impact and, thus, also are of concern to Millbrae.

San Andreas Fault

The San Andreas Fault is one of the longest, most active, and best studied in the world. The location of the fault is easily identified by surface lineaments which extend along with the axis of the San Francisco Peninsula. The main fault line bypasses Millbrae just west of the Junipero Serra Freeway along the eastern bank of Lake San Andreas. These lineaments are defined by scarps, sag ponds, offset streams and other evidence clearly related to recent fault breaks. (The maximum measured offset of the 1906 movement was 21 feet, horizontally.

It is anticipated that further surface displacements along the fault line are likely to accompany moderate to large earthquakes or result from gradual fault creep. The surface movement along the San Andreas Fault is generally horizontal and, potentially, may result in displacements of as much as 20 feet. Vertical displacements of as much as three feet, however, are also possible. Since there is presently creep movement along some of its length, including occasional earthquakes, it is expected that earthquakes of moderate to great magnitude will occur along the San Andreas Fault in the foreseeable future. The recurrence interval for a magnitude 8 earthquake along the San Andreas Fault (the 1906 earthquake in San Francisco measured 8.3) is estimated to be between 50 and 200 years.

Serra Fault

The Serra Fault is a relatively short bedrock fault which parallels the San Andreas nearly bisecting the City of Millbrae. The fault extends along a path through Millbrae along the Spur property into San Bruno where it terminates north of Sneath Lane. The Serra Fault is defined by juxtaposed bedrock units along its length and is thought to be possibly active, based on geologic evidence.

Future displacement may be caused by this fault, however, fault movement is thought to be less frequent here than on the main active strand of the San Andreas. The nature and amount of movement is generally unknown, but significant horizontal and vertical displacement is considered possible.

West of and extending southeast beyond the Serra Fault and parallel to the Junipero Serra Freeway lies an unnamed series of faults. These faults, however, are not considered active. They extend along the steep slopes of southern Millbrae and well into Burlingame.



SEISMIC FAULT LOCATION MAP

Millbrae, California

-  Active Faults
-  Fault Zones
-  Inactive Faults



1" = 2000'



(Based on U.S.G.S. Data)

San Bruno Fault

The exact location of the San Bruno Fault can only be inferred due to its generally concealed nature; no recent activity is in evidence. The fault line is thought to approach Millbrae from the north, between the Southern Pacific Railroad tracks and the Bayshore Freeway. Whether this fault continues into Millbrae or not is, at this time, unknown.

Hayward Fault

The Hayward Fault is located east of San Francisco Bay and extends southward toward Hollister, where it is thought to merge with the Calaveras Fault (discussed below). In 1836 and again in 1868, significant earthquakes were attributed to this fault. Continued activity is indicated by current measurements showing active creeping along its length and numerous smaller earthquakes recorded in recent years.

Calaveras Fault

The Calaveras Fault borders the eastern flank of the Berkeley-Hayward Hills, extending southward until it joins the San Andreas Fault Zone south of Hollister. Epicenters of recent earthquakes have been located along or near this fault. Fault creep measured in the City of Hollister has resulted in property damage similar to that caused by creep and faulting along other branches of the San Andreas Fault System.

Evaluation of Local Seismic Hazards and Development Constraints

Due to the differing geology throughout Millbrae and the locations of its active faults, the City is confronted with several types of seismic hazard. Most of these hazards happen to characterize particular areas of Millbrae. Analysis shows the greatest seismic hazard to development in Millbrae is in two geographically distinct areas - on the steeper hillsides and along the original Bay shoreline, much of which is now artificial fill.

Fault Creep

This is an ongoing process of relatively slow lateral displacement normally localized along active fault lineaments. Development which straddles the San Andreas or Serra Faults is potentially subject to gradual damage to building foundations, sidewalks, streets, and utility lines even though fault creep has not been identified along either fault in this vicinity.

Surface Rupture

The main surface lineaments of the San Andreas Fault (as shown on the preceding Location Map) are a location of extreme hazard to structures from future surface fault displacement, or surface rupture. The trace of the Serra Fault indicates a possible, but largely unevaluated hazard from future surface rupture. This phenomenon normally accompanies only large magnitude earthquakes.

Although ground rupture would probably occur along an existing fault or fault trace, it should be considered possible to occur anywhere within the San Andreas Rift Zone. The "zone of potential surface deformation" (patterned area on the Location Map), which surrounds each of the above faults, describes an area which may suffer fracturing and displacement during large fault movements. Rupture or relative ground movement might be in the horizontal direction, vertical, or a combination of both. Utility lines constructed within these areas may be severed in the event of surface rupture.

Ground Shaking

The most widespread effect of an earthquake is ground shaking; this is often the greatest cause of damage. Structures and utilities of all types may suffer severe damage or collapse if not designed to withstand the shaking force. The soil composition beneath a structure substantially affects the vibrational forces on that structure. Thus a structure located adjacent to a fault on stable rock might withstand ground shaking better than a structure built on loose soil material one hundred miles away. Although this phenomenon would to some extent affect the entire City, buildings precariously situated on steep unstable slopes and on loose or soft soil are probably subject to the greatest damage.

With so many faults in the Millbrae vicinity, the City is fortunate to have relatively few buildings over two or three stories in height. Taller structures, unless they are specially designed to withstand seismic shock, are normally more prone to serious earthquake damage.

Landslides

Landslides are often a secondary effect of ground shaking from seismic activity. The steep slopes in Millbrae have already proven to be, in many areas, unstable and susceptible to landslides. This naturally hazardous condition has been seriously compounded by many incidents of insensitive residential subdivision. Steep grading cuts have left many home sites and adjacent properties subject to extreme risk. (See Safety Element.)

Liquefaction

Soil liquefaction is another secondary effect of ground shaking, a phenomenon in which water-saturated, cohesionless soil temporarily loses its strength when subjected to dynamic forces. The looser the soil, usually the greater the susceptibility to liquefaction. The areas of Millbrae which are considered to be especially susceptible to liquefaction are those comprised of San Francisco Bay mud, with or without artificial fill material. These areas are located generally east of the Southern Pacific Railroad tracks. Whether or not the soil will actually liquefy depends on the soil properties, the intensity and the duration of the shaking. When liquefaction occurs, building foundations may sink or tilt several feet into the underlying soil, with differential ground subsidence possibly a contributing factor.

Tsunamis

Tsunamis, commonly called "tidal waves", are frequently induced by earthquake activity. Earthquakes responsible for tsunamis may originate on land or at sea long distances from the damage center. Tsunamis that enter San Francisco Bay are quickly dissipated. Damage is normally confined to small craft which are not properly moored.

Millbrae is generally protected from tidal flooding by higher ground along the Old Bayshore Highway, on the east, and high banks of one of the two flood control canals, on the south. Recent studies, however, suggest that a maximum tsunami wave height in the Bay of 20 feet is possible at the Golden Gate Bridge. A tsunami of this magnitude could threaten areas in Millbrae near Bayshore Freeway, although wave heights would be substantially reduced.

Seiches

Seiches are waves in isolated lakes and reservoirs resulting from the tilting or surface displacement of the bottom or sides. The San Andreas Lake is not considered a threat to Millbrae because of the difference in elevation and the intervening topography.

One effect related to seiches is the oscillation which can occur during earthquakes in water storage tanks, both elevated and ground supported. The bulging of steel tanks has been noted following several recent earthquake disasters around the world. Millbrae has numerous water storage tanks located on its hillsides, in very close proximity to two active faults. Development surrounding these tank sites should be assured by the City that tank construction is adequate to withstand the "maximum probable seismic event".

A second related effect is the spilling or "slopping" from open drainage channels. This may conceivably present a threat to existing and potential development immediately adjacent to the City's two flood control canals leading to the Bay, especially at high tide when they are more likely to be full.

Policies

The following policies are considered necessary to insure an acceptable level of risk to all new development in Millbrae:

1. Buildings for human occupancy should not be constructed on or across the main surface lineaments of the San Andreas Fault, unless such buildings can safely accommodate anticipated fault displacements.
2. No additional major streets or public utility lines for gas, water, electricity, flood control, and sanitary sewers should be constructed across any active faults.
3. High-occupancy structures (such as schools, hospitals, and apartments) or critical emergency facilities (such as fire and police stations, emergency relief storage facilities, and water storage tanks) should not be located within an active fault's "zone of potential surface deformation".
4. The subdivision ordinance and local building code should require detailed geotechnical (geologic and/or soil engineering) site studies for all new development to evaluate development risk and determine the engineering precautions necessary to satisfactorily mitigate that risk. The burden should be on the developer to prove to the City that a particular site can be developed without undue landslide hazard to that site or surrounding development. (See Safety Element.)
5. Local building codes should require detailed geotechnical investigation of new development sites on Bay fill. Special construction standards should be adopted to insure the safety of development against the effects of liquefaction and/or subsidence.

CONSERVATION

Purpose

As is the case with all cities, Millbrae either produces or has available to it certain natural resources necessary to sustain everyday life; these are basically the air, water and land plus the animal and plant life forms they support. With increasing urbanization, a greater demand has naturally been made on these resources for functional and economic reasons, often without knowledge or regard for the consequences. Many cities across the country have come to realize too late that natural resources they had always taken for granted have become damaged beyond further value or entirely used up. If Millbrae is to retain what remains of its natural resources for the use and enjoyment of future generations, the City must take positive action at this time. It is the purpose of the Conservation Element, by way of the policies it sets forth, to insure the conservation and guide the development and use of those resources critical to Millbrae.

The Conservation Element offers a brief physical description of each of the basic resources available to Millbrae with an examination of their local use characteristics. A discussion of current or potential problems stemming from misuse is followed by general recommendations for protecting these resources and enhancing Millbrae's natural environment.

Land Resources

Because most of the City's land resource has been already utilized, that which remains becomes of special importance. It is this land which represents Millbrae's last opportunity to realize any long-standing community goals or desires. Special opportunities for community use of these lands should be given primary consideration. A case in point is the only remaining waterfront area in Millbrae, now owned by the San Francisco Airport. According to the established policies of the Bay Conservation and Development Commission, water-oriented recreational uses are to be given highest priority for waterfront locations; public access to the water is guaranteed regardless of use.

To the west of Millbrae lies the San Francisco Watershed property. It is the policy of the City of Millbrae to discourage any development and to advocate that it remain in its present natural state.

Soil Hazards: The lands' relative capability for supporting development varies throughout Millbrae. The generally steeper lands west of the Spur property have proven more fragile and unstable; and consequently, more hazardous to residential development than lower, less steep areas of the City. This has all too often resulted in serious property damage caused by soil erosion, mudslides and landslides.

Contributing to this problem is the relatively dense residential development of the hill areas which, along with the extensive paving of land surfaces, has concentrated storm runoff on a much smaller land area. These circumstances reduce the total permeability of the ground, compounding soil hazards while placing a much greater load on the City's flood control system.

Flood Hazards: Some of the lower elevations of Millbrae have also proven hazardous to development; several areas are regularly flooded or inundated during heavy rainfall. A recent flood insurance study for Millbrae prepared for the Federal Insurance Administration, indicates that the local flood control system is sufficient to handle only moderate rainfall before some problems arise.

Recommended Land Conservation Policies

1. To preserve in open space, areas of Millbrae which are unique in character and may serve some future community use.
2. To preserve land areas which serve as habitats for important plant and animal life.
3. To prevent or correct localized problems of ponding caused by capacity deficiencies in the City's storm drainage system.
4. To minimize the erosion, siltation or blockage of local creek beds, conduits and flood control canals.
5. To discourage development which would encroach on or restrict natural stream channels and flood plains.
6. To discourage any further development of Millbrae's hill areas which would, through excavation, significantly scar the landscape and accelerate soil erosion. (See Open Space Element for recommended legislation to control such development.)
7. To insure slope stability, all areas where grading has destroyed natural vegetation and are susceptible to slides should be stabilized at the builder's expense.
8. To discourage any development of the San Francisco watershed property.

Water Resources

Supply: In urbanized areas, huge amounts of water are required to satisfy both household and industrial needs. To meet these needs, the City of Millbrae purchases its water from the San Francisco Water Department which collects water from a variety of surface sources. About 80% of the Water Company's annual distribution comes from the Hetch-Hetchy watershed in the Sierra Nevada Mountains. Another 18% is taken from the Calaveras watersheds throughout San Mateo County (such as that lying along the western City boundary) and stored in several reservoirs for future use. As long as these sources are protected and allowed to remain in their natural state, the San Francisco Peninsula should be assured of an adequate supply of water indefinitely. At present there appear to be no current or potential problems with the service or quality of Millbrae's water supply.

Demand: The local demand for water varies substantially from season to season; the summer months, of course, normally recording the highest levels of use. During these peak use periods, Millbrae stores an extra supply of water in six or more tanks located along Skyline Boulevard and throughout the higher elevations of the City. The primary function of this stored water supply is to serve as an emergency source of water for local fire fighting. Occasionally some of this surplus may be taken for normal domestic needs during long periods of dry weather.

The Bay: As a source of oxygen and as a habitat for wildlife and marine life, San Francisco Bay is Millbrae's foremost water resource. Like all Bay Area communities, Millbrae has an abiding interest in the future uses of the Bay and any development along its shores. Any filling of the Bay will be strongly discouraged. These decisions are to be made by the Bay Conservation and Development Commission in cooperation with Millbrae City government.

Wastewater Disposal: Keeping the Bay safe from serious pollution is of natural concern to everyone. The irreversible damage done to other great bodies of water across the country has proven the result to negligent use of our waterways. In addition to the loss of visual and recreational amenity, Bay fill and pollution normally disrupt local ecology. Many forms of marine life and birdlife depend on the Bay, especially the tidelands, for their food supply and shelter.

The Millbrae sewage treatment plant is responsible for "purifying" local wastewater before it is discharged into the Bay. In 1967, major plan expansion resulted in facilities which were capable of "secondary" treatment of sewage and the increased capacity needed to serve Millbrae's projected year 2000 population. The Millbrae plant now discharges effluent that meets the requirements of the San Francisco Bay Regional Water Control Board. At present, however, effluent is discharged into the nearby, nearshore waters of the Bay. This is occurring despite the recently established policy of the Water Control Board which prohibits such nearshore discharge, "regardless of the level of treatment." Realizing the current problem, the City has already taken steps to investigate alternative means of establishing a deep-water outfall.

Millbrae has no businesses at this time which contribute any significant volume of high strength wastewater to the sewage system. Any new businesses should have their waste disposal requirements investigated before locational commitments are made.

Recommended Water Conservation Policies

1. To discourage any use of local watershed land, streams or reservoirs which may threaten the quality of the City's water service.
2. Construct a deepwater outfall for its treated wastewater, either in conjunction with other jurisdictions or independently.
3. To encourage passive public water-related recreational use of Millbrae's waterfront land and tidelands.
4. To discourage any filling of the Bay.
5. To keep pollution of Bay waters to a minimum by encouraging only nonpolluting types of business activity to locate in the community. Strict performance standards should be established to regulate methods of waste treatment and disposal.
6. To participate in investigation of advantages and feasibility of eventual recycling of wastewater for regional reuse rather than discharge it into the Bay.

Air Resources

Local Climate*: Millbrae's climate is strongly controlled by major westerly and northwesterly winds flowing across the San Francisco Peninsula's hills into the Bay. Maximum summer temperatures rarely reach beyond the 70's while winter temperatures seldom drop below 40° F. Rainfall averages about 20 inches per year, primarily from winter storms. Some light fog normally occurs during the summer months in alternation with bright sunshine. Local weather characteristics are generally quite mild and are considered a residential amenity.

Air Pollution

According to a report recently published by the Association of Bay Area Governments, air pollution in the Bay Area has markedly decreased over the past 10 years. The most significant reason for this trend, which is expected to continue, is undoubtedly the impact of State and district emission control programs initiated in the last decade.

Because of Millbrae's close proximity to the San Francisco Airport and the Bayshore Freeway, it is affected by the air contaminants emitted by these sources. Air pollution in the vicinity of San Francisco Airport, however, is generally lower than at many Bay Area locales, since the prevailing wind speeds result in considerable dilution of pollutants. In fall and winter, when winds are their lightest, temperature inversions are quite common. These normally increase pollutant levels, especially during peak traffic hours.

As yet, Millbrae has no heavy industry which might endanger local air quality. Any new industry should be carefully scrutinized for any potential adverse effects.

Recommended Air Conservation Policies

1. To keep air pollution to a minimum by encouraging only nonpolluting types of industry and business activity to locate in the community. Performance standards should be established to regulate exhaust emissions.
2. To encourage continual monitoring of the level of pollutant emissions generated by airport activity and to encourage all possible reductions of these emissions.
3. To encourage methods of providing additional public mass transit service to Millbrae as a preferred alternative to increased freeway traffic.
4. To provide adequate open space throughout the City to increase the absorption and dispersion of chemical pollutants.

* Interpolated from data available for San Francisco International Airport

5. To encourage regulation of aircraft so that emission of unburned carbon and other pollutants over Millbrae will be discontinued.

References

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2. Flood Insurance Study, Millbrae, California, Federal Insurance Administration Department of Housing and Urban Development, December 1971.
3. "Information Bulletin: A Study of Oxidant Concentration Trends (1962-1972)," Bay Area Air Pollution Control District, January 1973.
4. Millbrae General Plan, Hahn-Wise and Associates, 1967.
5. "Role of Water in Urban Planning and Management," Geological Survey, Department of the Interior, 1973.
6. Wastewater Disposal Systems Project, Cities of Burlingame and Millbrae, Jenks and Adamson, September 1972.

OPEN SPACE

Put succinctly, the purpose of the Open Space Element is to specify which lands in Millbrae, both public and private, will be kept as open space now and in the future. It will also identify appropriate open space needs and uses for Millbrae's remaining open space resources. The Open Space Element also may be used to designate lands which should remain primarily open for at least an interim period of time until, and unless, there are substantial reasons for change. The Element includes a program which the local legislative body may pursue to preserve desired open space lands.

Definition

To help visualize what open space is, it must be thought of in its broadest possible terms. Where we live was all open space before man came. Once permanent structures were created, land became covered by "enclosed" space -- that area of a building which is on the land. As urban development progressed, a substantial portion of land in the urban area came to be covered with buildings. Presently, to urban dwellers who spend 90% of their lives indoors, contact with open space, i.e., the outdoors, is very limited.

In a highly developed, urbanized community such as Millbrae, open space provides necessary physical and psychological relief from the developed areas, i.e., homes, stores, offices, roads, and school buildings. Urbanized man must be able to turn to a natural environmental setting or an undeveloped area to enjoy scenic beauty or recreational activity. Land for neighborhood recreational use can also bring people together to improve neighborhood communication or provide a buffer separating different land uses or neighborhoods. Besides providing for man's psychological and recreational needs, retention of open space is needed to prevent erosion of land, protection from earthquake and fire hazards, to maintain ecological balance of plants and animals, and to help structure a city's developmental pattern. Undeveloped land provides for many concurrent human and environmental needs.

As defined by Assembly Bill 966, passed by the 1970 California Legislature, "Open space land" is any parcel of area of land or water which is essentially unimproved and devoted to an open space use as defined in this section, and which is designated on a local, regional or state open space plan as any of the following:

1. Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands.

2. Open space used for the managed production of resources, including but not limited to, forest lands, range land, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of ground water basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.
3. Open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.
4. Open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.

Scope of the Element

In 1970, the State Legislature added the Open Space Element to the list of mandatory General Plan Elements. The Legislative basis for requiring counties and cities to adopt a local open space plan and action program is as follows:

- "(a) That the preservation of open space land, as defined in this article, is necessary not only for the maintenance of the economy of the State, but also for the assurance of the continued availability of land for the production of food and fiber, for the enjoyment of scenic beauty, for recreation and for the use of natural resources.
- (b) That discouraging premature and unnecessary conversion of open space land to urban uses is a matter of public interest and will be of benefit to urban dwellers because it will discourage noncontinuous development patterns which unnecessarily increase the costs of community services to community residents.
- (c) That the anticipated increase in the population of the State demands that cities, counties, and the State at the earliest possible date make definite plans for the preservation of valuable open space land and take positive action to carry out such plans by the adoption and strict administration of laws, ordinances, rules and regulations as authorized by this chapter or by other appropriate methods.
- (d) That in order to assure that the interest of all its people are met in the orderly growth and development of the State and the preservation and conservation of its resources, it is necessary to provide for the development by the State, regional agencies, counties and cities, including charter cities, of statewide coordinated plans for the conservation and preservation of open space lands.

"(e) That for these reasons this article is necessary for the promotion of the general welfare and for the protection of the public interest in open space land."

The intent of the Legislature is to insure that cities and counties recognize that open space land is a limited and valuable resource which must be conserved wherever possible and that every local jurisdiction will prepare and carry out an open space plan which, along with State and regional open space plans, will accomplish the objectives of a comprehensive open space program.

The plan and action program are given teeth with the requirement that by January 1, 1974, cities and counties are to have also adopted open space zoning provisions consistent with the locally prepared and adopted open space plan. Any open space zoning provisions not based upon an adopted open space plan will be invalid. Moreover, failure to adopt both will subject the county or city to possible court action if any city actions are taken within open space areas in the absence of an adopted open space element. The law provides that "no building permit may be issued, no subdivision map approved...unless the proposed construction is consistent with the local open space plan". Finally, any jurisdiction wishing to become eligible for replacement revenues from the State for open space land designated as open space conservation area under the Williamson Act shall submit its adopted open space plan to the State Resources Agency. The plan shall be for the comprehensive and long-range preservation and conservation of open space land.

The Federal Government, recognizing the importance of open space lands with Title IV of the Housing and Urban Development Act of 1970, rewrote Title VII of the Housing Act of 1961 to consolidate the various separate programs under that title into a simple program of grants to acquire and develop open space land. Effective as of July 1, 1971, Title VII, Open Space Lands, reads as follows:

"(d) It is the purpose of this title to help curb urban sprawl and prevent the spread of urban blight and deterioration, to encourage more economic and desirable urban development, to assist in preserving areas and properties of historic or architectural value, and to help provide necessary recreational, conservation, and scenic areas by assisting State and local public bodies in taking prompt action to:

1. Provide, preserve, and develop open space land in a manner consistent with the planned long-range development of the Nation's urban areas.
2. Acquire, improve, and restore areas, sites, and structures of historic or architectural value.
3. Develop and improve open space and other public urban land, in accordance with programs to encourage and coordinate local public and private efforts toward this end."

Open Space Policy Statement

On June 2 and 3, 1972, approximately 100 Millbrae residents participated in an Environmental Quality Conference to discuss the current state of the City's physical environment and to formulate policies to guide future development. Many of the concerns voiced by Conference participants related to the quantity and quality of public and private open space. Most of the participants expressed a concern for the preservation of remaining open spaces in Millbrae. Perhaps even more important, these citizens indicated a willingness to accept increased property tax assessments as a way for the City to purchase certain open space properties and develop existing areas.

Total open space within the City, including the Green Hills Golf Course, the Spur property, the Water Department lands, school and existing park sites was considered adequate by most of the participants. What was considered inadequate, however, are proper facilities, equipment and general improvements. Ironically, the need for passive recreational uses, hiking trails and natural environmental areas was also considered inadequate. This is reconciled by a very high percentage of the participants registering a desire for large areas left open for passive uses. The Archdiocese property was cited as the only suitable remaining area in Millbrae for this type of use. Facilities were felt to be inadequate on many of the existing City park sites, particularly in the Mills Estate and Meadows areas.

A recommendation for the use and development of the Millbrae Spur property was prepared by the Spur Development Study Committee and submitted to the City Council and Planning Commission in early May, 1972. The recommendation was the result of two years of study and public hearings on issues concerning the Spur property by the Committee.

In developing the plan for the Spur property, the Spur Development Study Committee felt that areas having scenic or recreational value should be retained in public ownership either as open space land or for minimal park and recreational purposes. An all weather hiking and bicycle path was recommended for the entire length of the Spur.

Concern also was expressed about the amount and type of open space in connection with development. Most of it is paved, auto-oriented space. Committee members expressed a desire for more effective, positive ways of requiring usable nonauto-oriented space.

The tone of the discussion over the open lands left in Millbrae seemed to reflect that the residents would wish to purchase the remaining lands and preserve them in their open state. This feeling can only be verified when Millbrae residents express their preferences on acquisition decisions in the voting booth.

Aside from the general desirability of using acquired lands for passive open space uses, the need for use of small parcels as natural open land was often mentioned.

In light of the Conference findings and desires of participants regarding open space, the following open space goals and policies are proposed as overall guidelines for directing future public and private activity affecting open space.

Open Space Goals

1. A parks and recreation system which provides areas, facilities and improvements conveniently located and properly designed to serve the recreation and open space needs of all residents of Millbrae.
2. Enhancement of streets, plazas, and other urban open spaces in residential, commercial, and business neighborhoods.
3. Conservation and enhancement of Millbrae's natural vegetation and physical features to retain the appeal and visual amenities unique to Millbrae.
4. Preservation of the natural character and open space value of the Millbrae Spur.
5. Inclusion as permanent open space of as many remaining large undeveloped areas of Millbrae as economically possible.
6. Utilize open space lands as protection from potential seismic and geologic hazards and prevent further development upon hazardous areas.

Open Space Policies

1. Provide open space areas for a wide variety of recreational opportunities. Construct facilities and develop programs which encourage a maximum of resident participation.
2. Encourage and provide landscaping on private and public lands. Provide well-designed pedestrian facilities in areas of intensive pedestrian use.
3. Encourage maximum open space in residential developments both existing and proposed.
4. Protect and conserve scenic and vista areas from deterioration or destruction through private or public actions.
5. Make maximum use of Federal, State, and County programs wherever possible in all matters concerned with open space.
6. Provide a program of incentives and rewards to encourage provision of additional open space by private actions.
7. Encourage the development of hiking and bicycle paths consistent with the needs and desires of the community.

The Uses of Open Space

Broadly defined, open space includes all areas of land and water not covered by man-made structures. This covers a wide range of land uses, with varying functions. Open spaces can be large or small, private or public, multipurposed or single-purposed, intensively used or undeveloped.

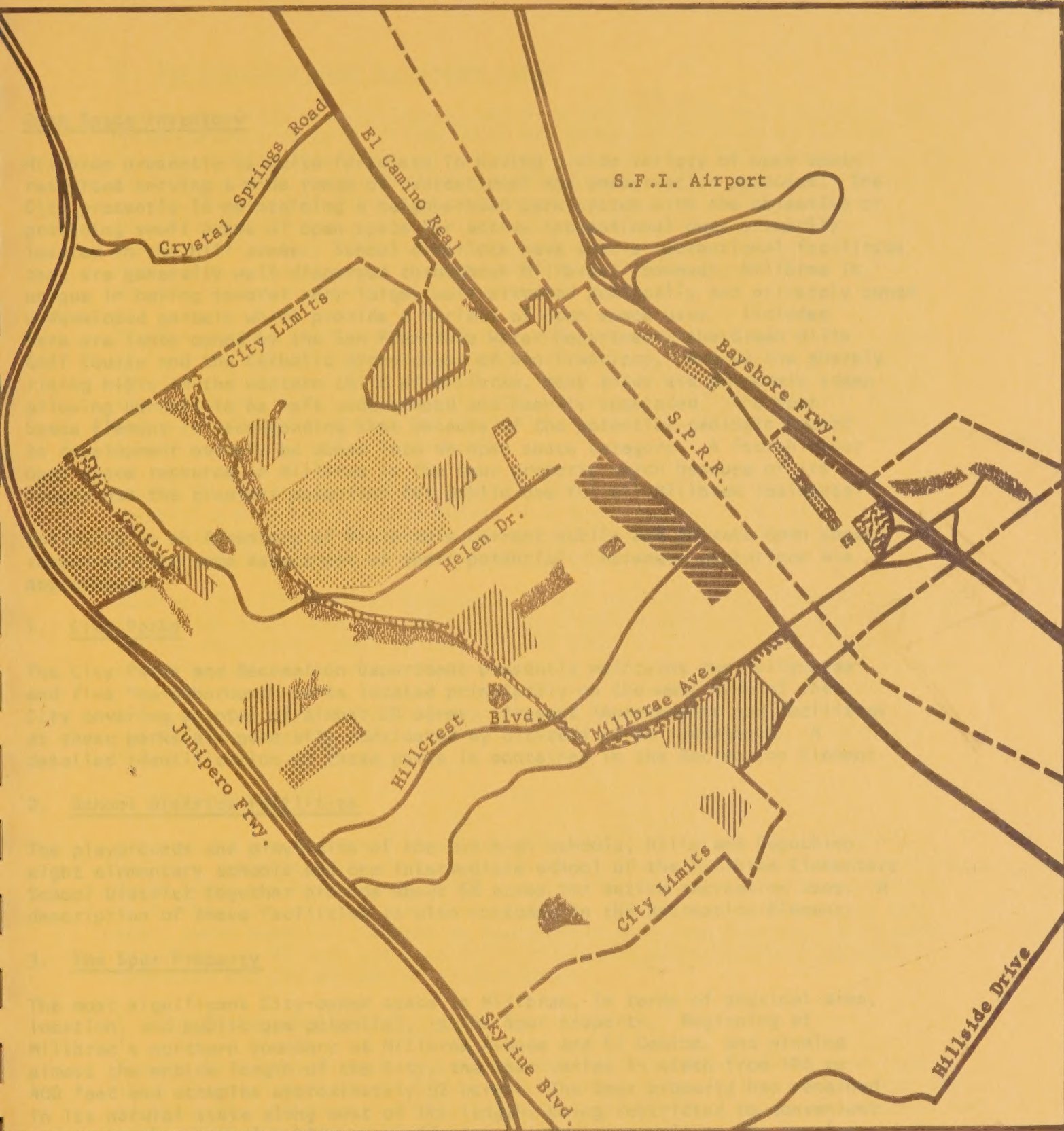
Millbrae, being largely developed, has many "urban" open space areas which include land having value for parks and recreation purposes, conservation of land and other natural resources, historic or scenic purposes. Urban open space includes publicly-owned lands such as parks, utility corridors, water areas and flood control channels. It could also include certain privately-owned lands upon which development should be permanently prohibited for reasons of public health, safety and welfare, such as landslide areas, earthquake hazard areas, and airport flight path zones.

The most common function of open space in urbanized areas is for a variety of active and passive recreational pursuits. Many passive low intensity recreational pursuits, such as hiking and riding, require large open spaces. On the other hand, many active pursuits, such as tennis and swimming, require smaller areas, but more elaborate facilities. All of these recreational activities offer important opportunities for the fulfillment of human physical and psychological needs.

A second important function of open space in urban areas is that it precludes or restricts the use of land which is unsuitable for development. The unsuitability may be due to steep slopes, unstable soils, watershed use, the presence of a water course, or a combination of these. The preservation of outstanding natural features, vegetation and wildlife habitats is a related function.

Other open spaces provide structure for urban development, such as freeway rights-of-way, linear parkways, plazas and urban or neighborhood parks. Some of these functions might provide focal points for more intensive urban developments, particularly when integrated into community improvement projects.

In Millbrae it is particularly appropriate to mention the open space uses of public utility lands, their rights of way and easements. Due to the fact that the San Francisco Water Department once owned large portions of Millbrae, many parcels and large acreages remain in Water Department ownership and function as valuable natural open space. The Pacific Gas and Electric easement bordering the airport owned lands is another example of open space where, due to the transmission lines, development of other structures is prohibited. These areas are presently left largely in their natural state. Where possible, however, landscaping should be encouraged to enhance their visual value as open space.



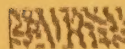
MILLBRAE OPEN SPACE ELEMENT



Encourage public & private open space for pedestrian shopping malls & plazas



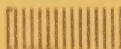
City Parks



Public Open Space



Private Open Space



Public Schools



Private Recreation



Public Utility Open Space



1" = 2000'



Open Space Inventory

Millbrae presently is quite fortunate in having a wide variety of open space resources serving a wide range of recreational and conservation purposes. The City presently is maintaining a neighborhood park system with the objective of providing small areas of open space for active recreational uses primarily located in the hill areas. School districts have active recreational facilities that are generally well dispersed throughout Millbrae. However, Millbrae is unique in having several very large, well situated publically and privately owned undeveloped parcels which provide a variety of open space uses. Included here are lands owned by the San Francisco Water Department, the Green Hills Golf Course and the Catholic Archdiocese of San Francisco. Due to the sharply rising hills in the western third of Millbrae, many areas are extremely steep allowing parcels to be left undeveloped and heavily vegetated. The Open Space Element is recommending that because of the potential geologic hazard to development parcels be zoned into an open space category. A fourth major open space resource in Millbrae is the Spur property which because of its length has the greatest potential for public use for all Millbrae residents.

Following is an inventory of Millbrae's current public and private open space resources with some assessment of their potential. Acreages quotations are approximate.

1. City Parks

The City Parks and Recreation Department presently maintains two "city-wide" and five "neighborhood" parks located principally on the west side of the City covering a total of almost 20 acres. Present improvements and facilities at these parks are generally considered by citizens to be inadequate. A detailed identification of these parks is contained in the Recreation Element.

2. School District Facilities

The playgrounds and playfields of the two high schools, Mills and Capuchino eight elementary schools and one intermediate school of the Millbrae Elementary School District together provide about 68 acres for active recreation uses. A description of these facilities is also included in the Recreation Element.

3. The Spur Property

The most significant City-owned space in Millbrae, in terms of physical area, location, and public use potential, is the Spur property. Beginning at Millbrae's northern boundary at Millbrae Avenue and El Camino, and winding almost the entire length of the City, the Spur varies in width from 100 to 400 feet and occupies approximately 52 acres. The Spur property has remained in its natural state along most of its length, being restricted to convenient access by the general public, yet offering unique opportunities for passive recreational uses once access is improved. The City has already programmed development of the Spur based on the recommendations of Spur Study Committee. Any public use, however, must respect the geologic hazards of the Serra Fault, which covers the northern half of the Spur property.

4. San Francisco Water Department Lands

Within the Millbrae City limits, the City and County of San Francisco owns three sizeable parcels of land which are presently utilized by the San Francisco Water Department, all of which are only marginally developed. The Water Department parcel on El Camino Real occupies 15.4 acres, and borders the Southern Pacific Railroad right-of-way to the east. The land is presently being used as the Peninsula Division Headquarters; however, the Department suggests this use might possibly be relocated within the next five years. The property is generously endowed with mature trees and is thought to contain the oldest structure in Millbrae.

Between Ludeman Lane and Helen Drive, the Water Department manages 11 acres of land divided by Broadway and Magnolia Avenue. The family residences of the Water Department Director and Assistant Director are located on either side of Magnolia Avenue, each occupying a large, heavily landscaped site. This property would become available for reuse also, if the forementioned Division Headquarters is relocated.

Centrally located on the west side of the City, the Water Department maintains a pump station on a parcel 16.6 acres in size. The terrain of this property is quite steep and very heavily vegetated. Earth slides have rendered a part of this property undevelopable.

Another significant Water Department parcel containing the recently completed filtration plant lies just outside the northwest boundary of the City, bordering Skyline Boulevard. Most of this 56 acre property is also quite steep, providing unexcelled views of the northern Peninsula area. The land remains in its natural state, heavily vegetated with live oak trees. Several privately operated equestrian stables have located on this property. It is not anticipated that this land will be subject to sale in the foreseeable future.

5. County Lands

Adjacent to the above described Water Department property lies San Mateo County's Junipero Serra Park, approximately 15 acres of which are in Millbrae. These steep and bare slopes exhibit many slide areas and remain susceptible to further soil erosion and ground shaking. As permanent open space, however, these potential hazards to development have been averted. This marks the first use of open space in Millbrae for the preservation of natural resources and the protection of development.

6. San Francisco Airport Lands

The San Francisco Airport owns approximately 90 acres of undeveloped land along the west side of the Bayshore Freeway, between Millbrae Avenue and the northern City boundary. Within this area, neighborhood parks are proposed for areas which lie beneath the P.G. & E. power line easement. Remaining areas below the easement should also be retained in private open space.

The Airport also owns the only waterfront land within the City of Millbrae. This property, approximately 8.5 acres in size, is located just inside the southern City limits, bounded by the two canal outfalls and the Old Bayshore Highway. This land was created with fill material and is generally unsuitable for any structural development. Residents of Millbrae and the surrounding communities have traditionally used this land for airplane watching and other passive recreational pursuits.

7. Private Lands and Facilities

The Green Hills Country Club features an 18 hole golf course extending over 103 acres of land and represents the largest reservoir of privately owned open space in Millbrae. This facility is considered financially successful and is expected to remain at its present size and location indefinitely.

8. Residential Interior Lots and Deep Backyards

Problems of steep topography and unstable soils in hill areas of Millbrae have resulted in only partial utilization of many very large residential lots. Homes have been constructed along streets, leaving deep rear lots and backyards largely or entirely unimproved, often extending down into creek beds. On a block scale, this has produced open interior areas which should be maintained in permanent open space.

Major Proposals and Recommended Action

Methods to carry out Millbrae's Open Space Plan as shown in the Open Space Map range from negotiated purchase of selected areas to permanent restrictions on the use of the land through zoning. Due to Millbrae's essentially developed character, zoning restrictions can be used to maintain many existing open space areas and prevent more intensive or imprudent development of areas proposed for permanent open space in the Plan.

Implementation by Regulation to Preserve Open Space

Changing attitudes towards conservation and new State legislation suggest that the ultimate legal rights of an owner to develop his land, and the timing of his development can be restricted more than previously thought.

With fine tuning of zoning in Millbrae regarding land ownership, topography, etc., much of the designated open space shown in the Element can be reserved.

Both the public safety and the community design (aesthetic) liabilities of developing very steep or geologically unstable land need to be better expressed in City zoning and subdivision regulations. Such restrictions will apply to a great part of the land shown for open space in the Element.

Major Proposals

1. Creation of an "Open Space" zoning district within the Zoning Ordinance.

The City should rezone major land areas or parcels into an "open space" category necessitating development proposals on land zoned open space to be subject to a rezoning hearing. In order to preserve existing open areas in Millbrae as open space, the following areas are recommended for rezoning to "Open Space":

a. San Francisco Water Department and Pacific Gas and Electric Lands

This would insure that the sale of any of these lands occurs in the future, development of a proposal for a use other than open space would be subject to a public hearing process for rezoning. This would also recognize the open space function related to the utility use.

b. The Spur Property

Rezoning here again would insure that if City policy were to change, the sale of lots within the Spur would be subject to a rezoning hearing. Zoning would recognize open space as the primary function of the property.

c. Private lands as designated on the map, that are presently undeveloped and are subject to geologic hazards due to unstable soil, extreme slope or proximity to an active fault zone.

These areas, for the most part, border the Spur lands to the west. These areas should be zoned open space to prohibit possibility of development pressures increasing overtime.

d. Rezoning of the area designated for a Bay Front Park

Presently owned by the San Francisco Airport, no structures would be allowed to be built on this area due to the proximity of the Bay. However, it is felt that this area would also be appropriate for the Open Space Zone since it is proposed for a passive park use.

The Element identifies special landscape features and other sites suitably located and capable of serving the indoor and outdoor recreational needs of the City, and indicates the range of improvements and facilities suitable to those sites and needs.

Outdoor recreation is generally considered in two categories, physically "active" and "passive" activities. The facilities to support these activities can be similarly categorized as "active", including neighborhood playgrounds and playfields, and community or regional parks, swimming pools, beaches, golf courses, etc.; or "passive", including city parks and other areas which provide paths, trails, viewpoints, places to sit and converse, or similar opportunities for unstructured recreational pursuits.

Indoor recreation may also include physically "active" activities such as team sports or gymnastics, which require a gymnasium or specialized facilities. Additionally, indoor recreation facilities are needed for club meetings, socializing, amateur theatricals, music, dancing, attending classes, reading, and games such as bingo or bridge. These facilities may consist of classrooms, workrooms, lounges, auditoriums, libraries and provision for food service.

Relationship to Other Elements

The Millbrae Recreation Element is very closely related to the City's Open Space Element. Its system of recreation sites, including natural areas, parks, and parkways constitutes a major structural block in the open space framework.

The Recreation Element considers in more detail than is appropriate in the Open Space Element the possible recreational capabilities and uses to which Millbrae's public and semi-public open spaces may be put.

Studies have shown that driving for pleasure is one of the Bay Area's most important recreational activities. The visual and recreational value of circulation routes is discussed at length in Millbrae's Scenic Highways Element. The City's scenic highways system should be considered an important component in Millbrae's recreational planning.

Review and Revision of the Element

The Recreation Element should be reviewed periodically and revised when necessary to reflect current community values and social standards. Such review should be undertaken on a comprehensive basis to maintain consistency with related elements. High standards for recreation facilities should be considered an integral part of the City's effort to maintain its pleasant urban environment, and should be so reflected in capital improvement scheduling.

1. Outdoor Recreation Outlook to 1980: San Francisco Bay Area Metropolitan Complex, California Department of Parks and Recreation, December 1966

Existing Recreation Facilities and Their Uses

Inventory of Existing Facilities

City Parks: At present there are five City parks located throughout Millbrae. A sixth, Bayside Manor Park, is leased from the Pacific Gas and Electric Company for \$1/year. These six parks total 18.94 acres (see Table 1). Additionally, there is a landscaped one-acre park space on the Civic Center grounds.

The largest of the parks, at 8.13 acres, is the Central Park located just west of the Civic Center. It serves both the surrounding neighborhood and the community as a whole since it is the site of the Millbrae Community Center. The others are smaller neighborhood parks.

All of Millbrae's parks are either fully improved or are budgeted for full improvement (see Table 23). The Community Center, constructed in 1969, is a complete multipurpose facility including auditorium, meeting rooms, and provision for food service.

The Spur Property: The 52 acre Spur site is a unique recreational resource which Millbrae is fortunate to possess. It is intended that the property be used by the entire community for passive outdoor recreation. Although at present the Spur is unimproved, pedestrian and bicycling trails in a natural setting are planned.

Junipero Serra County Park: Approximately 15 acres of San Mateo County's Junipero Serra Park are located in the northeast corner of Millbrae. This is a natural area characterized by steep terrain, and suited for hiking and wildlife observation.

School Playgrounds and Playfields: As in most cities, Millbrae's school grounds are important recreational resources. The two high schools*, one intermediate and eight elementary schools within the City provide 68.2 acres of playgrounds and playfields.

These school facilities are much favored, especially by the young, for active outdoor recreation such as team sports. The two high schools serve both their neighborhoods and the community at large, while the elementary schools are primarily neighborhood resources.

In addition, the local school districts have been most cooperative in allowing their facilities to be used by the Millbrae Parks and Recreation Department. Mills High School, especially, has proved an invaluable supplement to the facilities of the Community Center.

* Capuchino High School actually is in San Bruno but is surrounded by Millbrae.

Use of Existing Facilities

Millbrae's existing recreation facilities are well and fully used. During the 1971-72 fiscal year, attendance at Millbrae's playgrounds was estimated by the Parks and Recreation Department to be 31, 200 person-visits. That figure, of course, does not fully account for all casual, drop-in use of the City's playgrounds.

Additionally, the Community Center was estimated to have received 52,726 person-visits, and was fully booked for use over that time space. The swimming pool program, in cooperation with San Mateo Union High School District, received 3,182 person-visits in the summer of 1971.

All Recreation Department activities and programs resulted in 95,956 person-visits in 1971-72. That averages 4.6 visits/year for every citizen of Millbrae.

The Need for Additional Facilities

There are two means by which the need for additional recreation facilities may be assessed. The first is to directly consult Millbrae's citizens, as was done at the June 2, 1972, Development Policy Conference. The second is to compare the existing amount, location and type of recreation facilities in the City with standards recommended by the California State Recreation Commission.

The Findings of the Development Policy Conference

1. There is no need for additional land for active recreation use; however, there is a need for more facilities on existing public lands.
2. There is need for additional public land for passive open space use.
3. The City should develop a passive park adjacent to the Bay.
4. The Spur property should be improved as recommended.
5. There should be more attention given to open space in connection with, and as part of, private development.

State Recreation Commission Standards

In applying State Recreation Commission standards for the amount, location and type of recreation facilities desirable for a city like Millbrae, the physical character of the City must be acknowledged. Land in Millbrae, is largely occupied with few vacant parcels suitable for recreational use. As the Development Policy Conference recommended, standards for land development must include consideration of recreation needs. However, the acreage left to be developed in Millbrae is not large enough to have a significant effect on the City's total recreational system.

While a realistic and practical view of that fact must be taken in proposing recreation facilities, it is also imperative to make the fullest possible use of those recreational resources which still exist in Millbrae.

Amount of Recreational Land: The California State Recreation Commission recommends 1.9 acres of neighborhood, and .7 acres of community recreation space per 100 dwelling units. A neighborhood playground should contain a good range of equipment and activity space and, if not adjacent to a school, should be no smaller than 2.75 acres. A neighborhood playground would serve approximately 1,000 persons.

A community recreation facility should be no smaller than 15-25 acres and would serve 5-15,000 people. It would have larger scale and more varied facilities than a neighborhood playground.

Table 25 classifies Millbrae's existing recreation facilities as to whether they serve as neighborhood or community resources. Millbrae enjoys an abundance of communitywide and regional recreation space. However, this is largely natural area rather than improved parkland.

Location of Recreation Facilities: The effective service area of a community recreation facility is considered to include the homes within a radius of one to one and a half miles from that facility. All of Millbrae lies within the service areas of both the Community Center at the Central Park and the City's future community natural area, the Spur property.

Map 1 shows the service areas of 1/4+ mile radius of Millbrae's neighborhood and school playgrounds. These areas are circular except where "flattened" by a major impediment to the user visiting the facility, such as a major transportation route.

Areas of service inadequacy are shown. The large yards and the presence of the Spur property in the upper and mid-Millbrae Avenue areas render the apparent lack of service to these areas of lesser concern.

The recreation needs of the downtown and eastern areas of the City, however, are more acute. They are served by fewer parks than needed and are isolated from those located in the western portion of the city. A second park on the Pacific Gas and Electric Company right-of-way and a multi-purpose park in the Broadway Shopping Center are proposed to alleviate that deficiency without consuming too many of Millbrae's scarce land resources.

TABLE 23

EXISTING RECREATIONAL FACILITIES IN MILLBRAE

CITY PARKS

Central Park	8.13 acres
Millbrae Highlands	2.52 acres
Mills Estate Park	4.68 acres
Millbrae Meadows Park	2.30 acres
Lomita Hills Park	0.54 acres
Bayside Manor Park	0.77 acres

CITY PARKS SUBTOTAL	18.94 acres	18.94 acres
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SPUR PROPERTY (unimproved)	52.0 acres
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JUNIPERO SERRA COUNTY PARK (approx.)	15.0 acres
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SCHOOL PLAYGROUNDS AND PLAYFIELDS

Capuchino High	12.8 acres
Mills High	23.5 acres
Chadbourn Elementary	1.1 acres
Glen Oaks Elementary	2.6 acres
Green Hills Elementary	4.0 acres
Taylor Intermediate and Highlands Elementary	7.0 acres
Lomita Park Elementary	1.1 acres
Meadows Elementary	3.3 acres
Millbrae Elementary	7.3 acres
Spring Valley Elementary	5.5 acres

SCHOOLS SUBTOTAL	68.2 acres	68.2 acres
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CIVIC CENTER	1.0 acre
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TOTAL	155.14 acres
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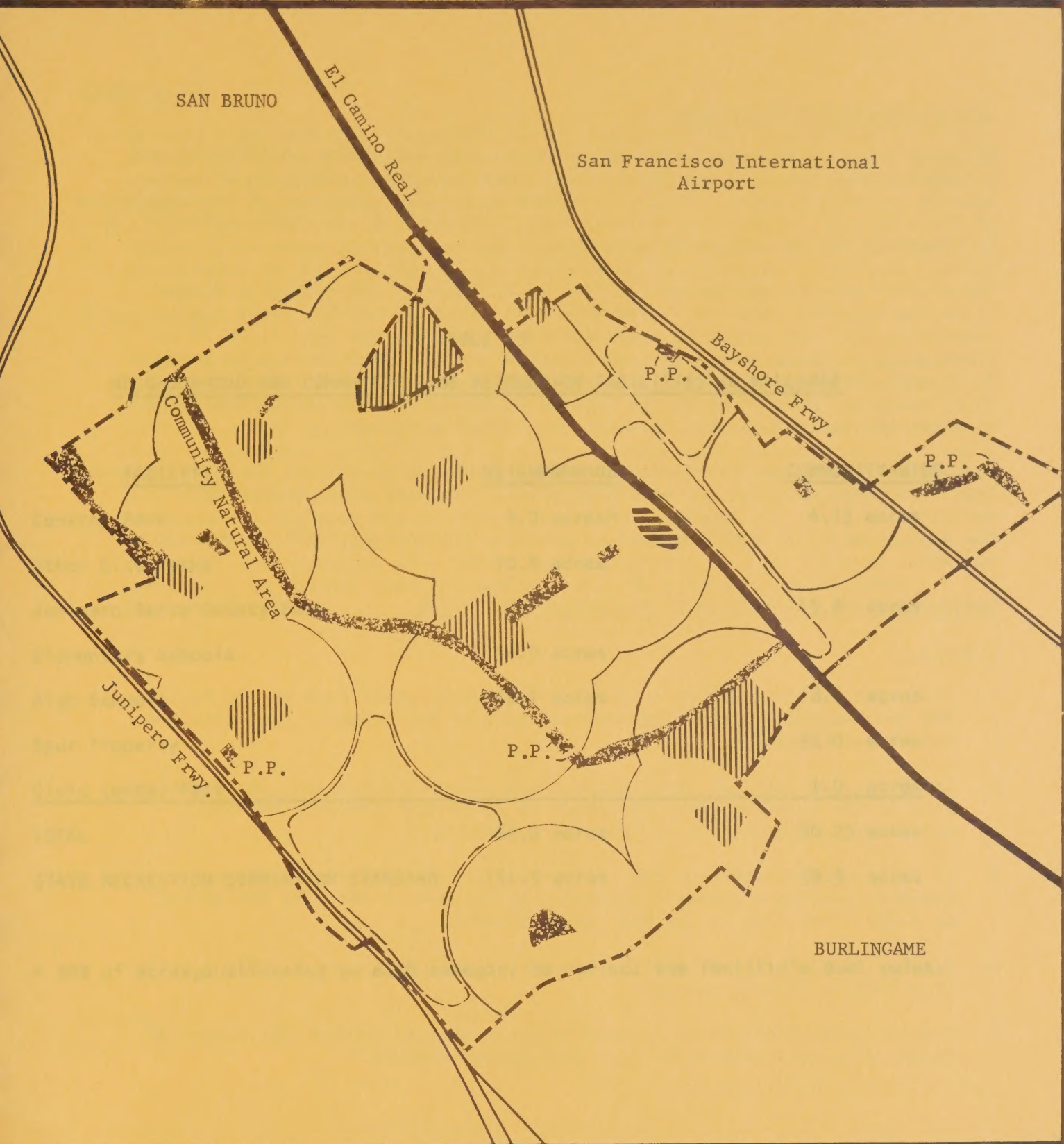
STATE RECREATION COMMISSION STANDARD*	221.0 acres
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* Based on the 1970 Census figure of 6,912 total dwelling units in Millbrae.

TABLE 24

EXCERPTS FROM THE MILLBRAE CAPITAL IMPROVEMENTS BUDGET RELATED TO RECREATION

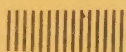
<u>ITEM</u>	<u>YEAR</u>	<u>AMOUNT</u>	<u>SOURCE OF FUNDS</u>
Gang Mower	1972-1973	\$ 10,000	
Central Park Improvements	1973-1974	\$114,415	Hotel/Motel fund and Federal funds
Mills Estate Park Improvement	1973-1974	\$ 66,852	Hotel/Motel fund
Millbrae Meadows Park Improvements	1973-1974	\$ 37,766	Hotel/Motel fund
Four Tennis Courts plus Tot Lot	1974-1975	\$ 54,000	Hotel/Motel fund
Improvements to Spur Property	1975-1978	\$232,800	Bond (?)
Community Swimming Pool	1978	\$509,706	Bond (?)



MILLBRAE : COMMUNITY & NEIGHBORHOOD RECREATION



Proposed multi-purpose
recreation area
(site not determined)



School - playground



Neighborhood Park



1/2 mile service area

P.P.

Proposed Park



"Need" Area



1" = 2000'



TABLE 25

NEIGHBORHOOD AND COMMUNITY-WIDE RECREATION FACILITIES IN MILLBRAE

<u>FACILITY</u>	<u>NEIGHBORHOOD</u>	<u>COMMUNITY-WIDE</u>
Central Park	4.0 acres*	4.13 acres
Other City Parks	10.0 acres	..
Junipero Serra County Park		15.0 acres
Elementary Schools	31.9 acres	
High Schools	18.1 acres	18.1 acres
Spur Property		52.0 acres
<u>Civic Center Park</u>		<u>1.0 acres</u>
TOTAL	64.0 acres	90.23 acres
STATE RECREATION COMMISSION STANDARD	161.5 acres	59.5 acres

* 50% of acreage allocated to each category to reflect the facility's dual roles.

Type of Recreation Facilities

Millbrae citizens have expressed satisfaction with the amount of existing and proposed active recreational facilities. They desire the provision of more passive recreation areas. This will become especially important as the population of the City ages and Millbrae becomes less "suburban" in its characteristics, as is happening throughout the United States.

The primary passive recreation facility in Millbrae is the Community Center. It is now reaching capacity in the amount of people it serves. This report recommends that the center be supplemented with additional facilities if an opportunity presents itself. It should also be noted that recreation programs do no good for those whose limited mobility prevents them from attending. A total recreational concept should include an organized program for "outreach" to those who may not be able to reach the community center.

The major outdoor passive recreation area is the Spur property. It is recommended that it be developed for hiking and bicycling with rest stops established periodically along its length. Special attention should be given to improving the Spur property in such a way as to conserve its natural features wherever possible.

Recommendations for Additional Recreation Facilities

Priority I

1. Develop a neighborhood park, similar to Bayside Manor Park on the Pacific Gas and Electric Company right-of-way east of Bay Street. (See also the Open Space Element.)
2. Develop a combined tot lot, neighborhood playground and passive recreation area in the Broadway Shopping Center to serve both shoppers and the surrounding high density residential neighborhood.
3. In full coordination with the recommendations for the Scenic Highways Element, develop a drive-in airport-viewing park on the site designated as a Bay Front Park in the Open Space Element.
4. Develop the Spur property with all weather pedestrian and bicycling paths in a largely natural setting.
5. Provide transportation to recreation activities to improve the access of groups with restricted mobility, such as the elderly.

Priority II

1. Develop a neighborhood playground on the portion of the Spur between Millbrae and South Ashton Avenue, or between Millbrae and Chadbourne Avenues. Creative use should be made of the resource provided by the existing orchard on the site.
2. Expand those existing neighborhood playgrounds whose size is smaller than that recommended by State standards, if and when adjacent property becomes available.

Priority III

1. Millbrae has experienced a minor decline in school enrollment, a phenomenon observed throughout California. If at any time declining enrollment prompts a local school district to abandon a school, the City of Millbrae should consider acquiring the school facilities to supplement the Community Center, which is approaching full capacity use. Ideally, the school to be acquired would be located in northern Millbrae to complement the facilities currently used for community activities in the Central Park at Mills High School.
2. As an alternative, the facilities of the Community Center might be supplemented by the provision of a Senior Citizen's Center. Such a center would preferably be located near the activity and facilities of the Broadway Shopping Center.

SCENIC HIGHWAYS

Purpose

The Scenic Highways Element of the General Plan is intended to set forth City policy toward the visual quality of land uses adjacent to its most important transit routes. More specifically, the Element establishes Millbrae's role in the State's Scenic Highway program and examines the opportunity to have Interstate 280, The Junipero Serra Freeway, officially designated an Official Scenic Highway under this program.

Although the State Scenic Highway system is intended to be the primary concern of this Element, the potential for upgrading or beautifying other important circulation routes also merits discussion. Therefore, consideration is given to enhancing the scenic amenities along Millbrae's sections of Old Bayshore Highway, the Bayshore Freeway, the Southern Pacific Railroad right-of-way, the Spur property, El Camino Real and Broadway. Inasmuch as any future BART extension to Millbrae will be by subway, no consideration is given to what would otherwise be important landscaping and land use regulations along its alignment.

Policies

1. The City of Millbrae is concerned with and, to varying extents, responsible for the utilitarian and aesthetic qualities of all transit routes within or immediately adjacent to the City.
2. The City recognizes the importance of alternate modes of transportation such as walking, bicycling, bus, train or rapid transit and the need to establish and maintain high quality visual corridors through which they pass.
3. The City fully endorses the State Scenic Highways Program and encourages the official designation of Interstate 280 as a Scenic Highway; as one local jurisdiction along its length, Millbrae stands prepared to adopt all reasonable measures to help achieve this end.
4. Millbrae will pursue its policy of landscaping important streets and thoroughfares in the City's business district.
5. The City will remain committed to maintaining a high quality local street system throughout Millbrae.

State Scenic Highway System¹

The California State Scenic Highway Program was established in 1963 to foster local initiative for conserving the State's scenic beauty along selected highways throughout California. In 1970, the Legislature adopted a "Master Plan of State Highways Eligible for Official Scenic Highway Designation". The required procedure for gaining official designation is outlined in a following section.

1. Much of the information contained in this Element regarding the Scenic Highway system is taken from a brochure entitled The Scenic Route, A Guide for the Official Designation of Eligible Scenic Highways, published in 1970 by the State of California Department of Public Works.

The master Plan, by design, includes highways of regional diversity which traverse both natural rural settings and attractive urban scenes. Emphasis, however, is placed on routes through essentially undeveloped areas in the State.

Local Highways Eligible for Designation

Interstate 280, connecting San Francisco and San Jose, is included in the State's Master Plan but has not yet been designated an Official Scenic Highway. This route passes by Millbrae and generally defines the City's western boundary. I-280, also known as the Junipero Serra Freeway, was an obvious selection because of its planned ridge-top alignment which will offer unrestricted views of the natural landscape of this region and extended views of the Bay. As I-280 approaches Millbrae from the north and south, however, scenic views are largely confined to the San Francisco watershed lands and reservoirs located below and off to the southwest side of the freeway. Views off to the other side into Millbrae have generally been blocked by freeway grading, landscaping and some development high on the ridge.

Certain factors already serve to control development and preserve views along parts of I-280's length. Perhaps the most significant is the value of the watershed, itself, popularly considered a critical resource to be conserved indefinitely. These same lands are legally protected by inclusion in the San Francisco State Fish and Game Refuge which covers an expansive area (surrounding both San Andreas Lake and the Crystal Springs Reservoir) west of the ridge.

Current County zoning for the watershed lands is RE-Residential Estate, a classification that clearly does not reflect the existing or foreseeable future use of the property. The County Zoning Ordinance is now being comprehensively revised. One anticipated change is the reclassification of watershed to a new "Open Space" zone. Lastly, the fact that the Junipero Serra Freeway is designated an "interstate highway" imposes certain State regulations along its length regarding signs for private advertising. These regulations strictly limit on-premise signs and prohibit off-premise signs within 1,000 feet of the right-of-way.

Procedure for Scenic Highway Designation

The legislative body of a county or city having jurisdiction over lands adjacent to eligible Scenic Highways has the responsibility for initiating procedures leading to official designation. The following outline describes the subsequent steps entailed in the designation procedure.

1. The city or county should request the State to make studies of the highway "corridor area" within its jurisdiction.
 - a. The local legislature may ask the Highways Division to conduct the studies or may delegate its authority to initiate studies, in cooperation with the Division, to a department, employee, commission or committee.
 - b. When the local legislature desires such study, it should notify, in writing, the District Director, State Department of Transportation.
2. Following initiation by the local jurisdiction, the Division staff will coordinate and conduct two studies entitled the "Corridor Survey".
 - a. The results of these two studies will be prepared, in cooperation with the local jurisdiction, by the District staff in a single comprehensive "Scenic Highway Report".
 - b. The report will contain maps, photographs and other necessary documentation.
3. The local jurisdiction shall prepare, with assistance from the Division of Highways staff, as requested, the Scenic Highway Specific Plan and Program of proposed implementation measures, which should insure the protection and enhancement of the existing natural and man-made scenic resources that contributed to the highway's being included in the State Master Plan for Scenic Highways.
4. The Division of Highways District Staff will forward to the Interdepartmental Committee on Scenic Highways the local Scenic Highway Plan and Program with its comments, together with the District Scenic Highway Report.
5. The reports will be forwarded to the Scenic Highway Advisory Committee after review and comment by the Interdepartmental Committee.
6. The Director of the Department of Transportation shall call a meeting of the Advisory Committee in order to review the proposal for designation as an Official Scenic Highway. The Committee shall then make its findings regarding the proposal and send them to the Director with its recommendation.
7. The Director shall inform the local jurisdiction of his/her decision regarding designation as an Official Scenic Highway. Approval shall mean that if the locality carries out its Scenic Highway Plan and Program as outlined in their proposal, the route will be designated as an Official State Scenic Highway.

As yet, neither San Mateo County, Santa Cruz County nor any of the incorporated cities within these counties have made formal requests to the State to undertake studies along their respective segments of the highway. Santa Clara County and some of its cities have, however, and are now awaiting further regional participation preferred by the State before it takes action.

Defining the Scenic Corridor

The State has formulated a very general set of parameters to help local jurisdictions understand its methodology in delineating the boundaries of a highway's scenic corridor. Basically, the corridor area is to be extended a reasonable distance on either side of the road to include all natural and man-made features having significant scenic value; and to establish a sufficient jurisdiction of regulatory power to adequately protect those features. Some land is nearly always included on both sides of the right-of-way, even when views off to one side are minimal.

Although the corridor is generally thought of as running parallel to and on either side of the highway, in some cases, a distant noncontiguous area may be included in the corridor and a less critical area may be excluded. As in the case of Millbrae, buildings, vegetation and topography may screen panoramas otherwise visible from the highway. Such a screen might be removed by fire, land use change, or just by modifications to the existing grading or landscaping pattern. Thus, consideration is given to locating corridor boundaries beyond features which presently obscure important views in the distance.

A complete discussion of criteria for corridor delineation is found in "The Scenic Route" previously referred to.

Recommendations to Advance Scenic Highway Designation

Initiation of Studies

Millbrae should without delay begin discussion of the advantages and any possible disadvantages of Scenic Highway designation along its segment of I-280. Unless there are serious objections, the County and neighboring cities should be advised of Millbrae's affirmative intention and encouraged to follow suit. Once County support and participation is promised, the City should request the Division of Highways to begin a local corridor study.

Corridor Protection

Before a route can be designated an Official Scenic Highway, the local jurisdiction (and any public agencies managing land within the corridor) must adopt a plan and program that will guarantee the protection and enhancement of scenic resources within the corridor. As a minimum, the local government should have an adopted General Plan containing basic policies for environmental protection. The other

Elements of the Millbrae General Plan establish development or conservation policies on a Citywide scale. The following policies, extracted from The Scenic Route, are recommended specifically for Millbrae's defined corridor area, however broad or shallow. Several imply a financial commitment by the Division of Highways where the right-of-way, itself, is involved.

1. Land use regulations in the corridor area should be consistent with the policies of the General Plan.
2. Heights and setbacks of new structures along the Highway (280) should be regulated so as not to obstruct important views.
3. Any offensive land uses should be screened from the view from the highway. This may be accomplished by proper use of planting, grading or fencing.
4. The size, height and type of on-premise signs allowed should be the minimum necessary for identification. Off-premise signs are not permitted within a Scenic Highway corridor by State law.
5. The City should encourage the undergrounding or camouflaging of existing overhead utility lines in the corridor, if feasible. Any new utility lines must be placed underground, by State law.
6. Vegetative cover, preferably native to the area, should be provided to reduce grading scars and blend with the natural landscape.
7. Existing specimens of trees or other valuable plant materials should be preserved.
8. Selective clearing should be done to reveal important views from the highway.
9. Site planning, landscaping, and architecture in the corridor should result in an attractive appearance from the highway and harmonious relationship with the natural landscape.

Citizen Participation

To assure successful implementation of the Scenic Highways program, participating jurisdictions should make an early effort to involve their citizenry in the formulation of policies which are certain to affect them later. A citizens group should be formed at the city and/or county levels (similar to the Roadside Council at the State level) to create an awareness and understanding of the program to stimulate contributions by the public. This group or another appointed by each local governing body should serve as a citizens' advisory committee to the governing body for the duration of the program's implementation.

Recommended Local Improvements to Other Circulation Routes

Although not eligible or appropriate for Official Scenic Highway designation, several other circulation routes throughout the City are of sufficient importance as to demand attention in this Element. Most of these also carry large volumes of traffic and all offer special opportunities to significantly enhance the urban design character of Millbrae.

Many of the policies recommended for the Scenic Highway corridor will be seen to apply equally well to the routes discussed below.

Old Bayshore Highway

Old Bayshore Highway provides the sole access to Millbrae's only waterfront land. Privately owned properties on both sides of the right-of-way are presently vacant but remain subject to increasing development pressure.

1. Property east of Old Bayshore Highway should either be acquired by the City or regulated to preserve views of the Bay from the right-of-way.
2. All or part of the waterfront land should be appropriately graded and landscaped for public use.
3. Development of property west of Old Bayshore Highway should be adequately set back from the right-of-way, appropriately landscaped, and in harmony with its waterfront setting.
4. The right-of-way itself should be well-maintained and adequately lighted. Specific provisions should be made for pedestrian and bicycle traffic.

Bayshore Freeway

The Bayshore Freeway is the primary means of access to Millbrae from origins outside of the immediate vicinity. The view into Millbrae from the Freeway is the first impression of the City visitors get and the only impression offered passersby continuing north or south.

1. The vacant Airport property would be very difficult to develop without substantial impact on adjacent residential property. This factor, and other difficulties, suggest the property will remain as open space for the foreseeable future. In this condition, it presents a very pleasant view from the freeway.
2. Existing landscaping along the west side of the Freeway should be retained. New landscaping should be added if necessary to screen parking or storage areas.
3. The Millbrae Avenue interchange should be well-landscaped and lighted.
4. Millbrae Avenue, as the principal gateway to the City, should be subject to these same recommendations. The landscaped median should be improved.

Southern Pacific Railroad Right-of-Way

The commuter train remains a viable mode of transportation along the San Francisco Peninsula and is showing signs of becoming an increasingly popular alternative to the automobile. Unless BART is extended to San Mateo County and beyond, the Southern Pacific Railroad will play a significant role in the transportation network of the Bay Area. At the present time, approximately 5% of Millbrae's employed population relies on the train for daily transportation to and from work.

1. Both sides of the right-of-way should be well landscaped; new shrubs and trees should supplement existing vegetation to create a "greenbelt" effect.
2. Offensive land uses visible from the tracks should be rehabilitated, if feasible, or screened from view through the creative use of earth berms and vegetation.
3. Some new land uses may be effectively oriented to the railroad right-of-way. All uses need not turn their backs to the tracks.
4. The Millbrae station should be well maintained and distinctively landscaped. Parking lots should be screened from view.

El Camino Real and Broadway (See Core Area Development Plan)

El Camino Real and Broadway are Millbrae's greatest focus of business and commercial activity. El Camino Real is, of course, a major artery bringing traffic into the City from points north and south. It is the development along these two streets which primarily constitutes Millbrae's image to the tourist or shopper. Several Peninsula cities offer good examples of what can be done to visually enhance Millbrae's central business district.

1. New development in Millbrae's business district should conform to a City-wide architectural theme (style, materials, color). Building heights should generally harmonize with Millbrae's established single-family character. Important views should be maintained from the central business district up to the ridge whenever possible. All new development should be subject to architectural and site plan review.
2. On-premise signs should be strictly regulated as to size, height, type and location. No new off-premise signs or billboards should be permitted. All nonconforming signs should be phased out or amortized.
3. The City and Chamber of Commerce should solicit viable new uses to replace vacant or marginal uses in the El Camino Real-Broadway vicinity. Substandard buildings should be completely rehabilitated when feasible, the object of a "paint up - fix up" campaign when not.
4. Street median and sidewalk areas throughout the central business district should be landscaped. (The City has programmed \$10,000 per year for

landscaping; several landscaping programs have already been completed by the City or are now in the planning stage.) Special pavement surfaces or striping should designate pedestrian crosswalks and bicycle lanes.

5. Parking lots now visible from El Camino Real and Broadway should be screened by intensive planting or fencing.
6. The central business district should be adequately lighted for safe and pleasant night-time use. Benches, drinking fountains, trash receptacles, bicycle racks, etc., should be furnished at regular intervals.

APPENDIX I

CONTINGENCY PLANS

The City of Millbrae is one of 20 jurisdictions which comprise the San Mateo Operational Area Civil Defense and Disaster Organization. This body has adopted a rather elaborate emergency plan for intrajurisdictional coordination outlining the responsibilities of County personnel in the event of large scale disaster. At this time, however, Millbrae has no complementary plan defining the local responsibilities of the City and its employees.

The State Office of Emergency Services recommends that local earthquake emergency plans include provisions for:

1. An organization which:
 - a. Has assigned emergency functions to intrajurisdictional agencies to perform field operations;
 - b. Has personnel designated and trained to perform specific tasks both within the control center and the damaged area;
 - c. Controls and coordinates field operations from a predesignated, earthquake resistant control center;
 - d. Has communications to all operating field forces and with higher and lower levels of government, to exchange operational information;
 - e. Has a staff to prepare and disseminate essential public information;
 - f. Conducts exercises to perfect and test plans and procedures.
2. Pre-earthquake preparations which:
 - a. Identify most vulnerable structures, by way of a Citywide building inspection, in relationship to their effect on emergency operations;
 - b. Have outlined areas subject to inundation due to the failure of dams, and developed plans and procedures for rapid notification and evacuation of people from such areas;
 - c. Identify and inventory available essential resources;
 - d. Establish procedures for obtaining mutual aid;
 - e. Insure continuity of emergency communication systems including augmentation of radio communications with Radio Amateur Communications Emergency Services or other organized volunteer emergency radio capability; and
 - f. Insure continued operation or rapid restoration of essential public utilities.

3. Post-earthquake operations which:

- a. Provide rapid surveillance and assessment of the damaged area;
- b. Search out and rescue people trapped in damaged structures or isolated danger areas;
- c. Conduct medical aid for the injured;
- d. Provide necessary fire prevention, firefighting and lifesaving services in devastated or threatened areas;
- e. Provide first aid in the damage area and transport injured to emergency medical facilities;
- f. Clear debris from transportation routes into and away from damaged areas;
- g. Evacuate or direct people from danger areas to locations providing relative safety, shelter and sustenance;
- h. Provide traffic supervision and control along established evacuation routes, and security for evacuated areas;
- i. Care for displaced people;
- j. Remove, identify and preserve dead for future disposal;
- k. Provide for reuniting families;
- l. Provide for informing victims' relatives outside of area;
- m. Relieve hardship and expedite rapid and orderly reconstruction and redevelopment;
- n. Prepare and disseminate essential public information through the news media;
- o. Prepare and maintain a log of operations; and
- p. Develop a procedure for cooperating with qualified earthquake investigators.

APPENDIX 11

INDIVIDUAL PREPAREDNESS

Unlike most other natural disasters, such as floods or fires, earthquakes give no warning at all. It is, therefore, important that individuals living in earthquake prone zones be made aware of precautions which they, themselves, can take to minimize the effects of such a disaster.

1. Potential earthquake hazards in the home should be removed or corrected. Top-heavy objects and furniture such as bookcases and storage cabinets, should be fastened to the wall and the largest and heaviest objects placed on lower shelves. Water heaters and other appliances should be firmly bolted down, and flexible connections should be used whenever possible.
2. Supplies of food and water, a flashlight, a first aid kit, and a battery-powered radio should be set aside for use in emergencies. Of course, this is advisable for other types of emergencies, as well as for earthquakes.
3. One or more members of the family should have a knowledge of first aid procedures because medical facilities nearly always are overloaded during an emergency or disaster, or may themselves be damaged beyond use.
4. All responsible family members should know what to do to avoid injury and panic. They should know how to turn off the electricity, water and gas; and they should know the locations of the main switch and valves. This is particularly important for teenagers who are likely to be alone with smaller children.
5. Above the fourth or fifth floor in taller buildings, heavy objects such as desks, tables and bookcases should be bolted or otherwise securely fastened to the floor or wall. Heavy furniture like this can become virtual battering rams under some conditions of earthquake shaking. Stout guard rails should be installed across windows which extend to the floor.
6. In new construction or in alterations of existing structures, building codes should be diligently followed to reduce and minimize potential hazards. Construction sites should be carefully selected, graded, and engineered to reduce all potential geologic hazards including landslides, subsidence and the effects of earthquakes.

APPENDIX 111

GLOSSARY OF TERMS ASSOCIATED WITH SEISMIC SAFETY

1. Seismic - pertaining to or caused by earthquake.
2. Seismic Hazards - hazards related to seismic or earthquake activity.
3. Fault - a break in the earth's crust where movement has taken place.
4. Tsunamis - earthquake induced ocean waves, often called "tidal waves".
5. Seiches - earthquake induced waves in lakes or ponds.
6. Soil Liquefaction - change of water saturated cohesionless soil to liquid, usually from intense ground shaking; soil loses all strength.
7. Surface Lineaments - lines connecting modified topographic features clearly or probably related to recent fault breaks.
8. Active faults - faults that have moved during historic time or which through geologic evidence are deemed likely to move during the useful life of a structure (or community).
9. Inactive fault - faults showing no evidence of movement in recent time.
(Note: definitions of "active" and "inactive" vary in relation to type of use and structure.)
10. Ground Shaking - shaking of the ground resulting from sudden fault movement.
11. Ground Failures - including mudslide, landslide, liquefaction, subsidence.
12. Surface Ruptures - breaks in the ground surface resulting from fault movement.
13. Maximum Probable Event - describes the largest earthquake magnitude which can be reasonably expected to occur. A magnitude on the order of the 1906 San Francisco earthquake (8.3 Richter Scale) is considered this region's maximum probable event.
14. Fault Creep - generally slow, horizontal sliding of one side of a fault break past the other.
15. Zone of Potential Surface Deformation - a continuous zone extending on either side of any mappable active fault lineament.

APPENDIX IV

Ordinance No. _____

ORDINANCE OF THE CITY COUNCIL OF MILLBRAE ADDING CHAPTER _____ TO THE MILLBRAE MUNICIPAL CODE

RE NOISE ABATEMENT

The Council of the City of Millbrae does ORDAIN as follows

Section 1 There is added to the Millbrae Municipal Code, a new section to be entitled "Chapter _____ Noise" as shown on Exhibit A attached hereto and made part hereof by reference.

Section 2 This ordinance shall become effective upon the expiration of sixty days of its passage.

Section _____ Declaration of Policy. It is hereby declared by the City of Millbrae to be a policy to prohibit unnecessary, excessive and annoying noises subject to its police power. The City will cooperate with the Airport Land Use Committee and the FAA in establishing acceptable noise level standards for jet aircraft at the San Francisco International Airport which is adjacent to the City. It is the intention of the City Council to abate existing harmful noise levels occasioned by the City's proximity to SFI Airport and, in the public interest, to control the adverse and detrimental effects of noise from all sources.

Section _____ Definitions. For the purposes of this chapter certain terms are defined as follows:

(a) Ambiant Noise is the all encompassing noise associated with a given environment, being usually a composit from many sources near and far. For purposes of this ordinance it is the lowest sound level repeating itself during the 15 minute test period as measured with a precision sound levelmeter, using slow response and "A" weighting, without inclusion of noise from other isolated identifiable sources, at the location and time of day near that at which a comparison is to be made.

(b) Decibel "Decibel" (dB) shall mean a unit of level which denotes the ratio between two quantities which are proportional to power; the number of decibels corresponding to the ratio of two amounts of power is 10 times the logarithm to the base 10 of this ratio.

(c) Precision Sound Level Meter is a device for measuring sound level in decibel units within performance specifications established in the American National Standards Institute S 1.4 "Specification for Sound Level Meters".

(d) Sound Level (noise level) in decibels is the maximum continous sound level or repetitive peak level produced by a source or group of sources as measured with a precision sound level meter using the "A" weighting scale with the meter response function set to "slow"

(e) Motor Vehicle is any device by which any person or property may be propelled, moved or drawn upon a highway or street.

(f) Property Plane is a vertical plane including the property line which determines the property boundaries in space.

(g) Emergencies are essential activities necessary to restore, preserve, protect or save lives or property from imminent danger of loss or harm.

Section _____ Residential Property Noise Limits

- a. No person shall produce or allow to be produced by any machine, animal or device, or any combination of same, on a residential property, a noise level of more than 6 dBA above the local ambient at any point outside of the property plane.
- b. No person shall produce or allow to be produced by any machine or device, or any combination of same, on multi-family residential property, a noise level more than 6 dBA above the local ambient three feet from any wall, floor, or ceiling inside any dwelling unit of the same property, when windows and doors of the dwelling unit are closed, except within the dwelling unit in which the noise or sources may be located.

Section _____ Commercial and Industrial Property Noise Limits

No person shall produce or allow to be produced by any machine or device, or any combination of same, on commercial or industrial property, a noise level more than 10 dBA above the local ambient at any point outside of the property plane.

Section _____ Public Property Noise Limits

- a. No person shall produce or allow to be produced by any machine or device, or any combination of same, on public property, a noise level of more than 20 dBA above the local ambient at a distance of 25 feet or more unless otherwise provided in this chapter.
- b. Sound performances and special events not exceeding 80 dBA measured at a distance of 50 feet are exempt from this chapter when approval therefore has been obtained from the appropriate governmental entity.
- c. Vehicle horns, or other devices primarily intended to create a loud noise for warning purposes, shall not be used when the vehicle is at rest, or when a situation endangering life, health, or property is not imminent.

Section _____ Special Provisions

- a. Daytime exceptions. Any noise source which does not produce a noise level exceeding 70 dBA at a distance of 25 feet under its most noisy conditions of use shall be exempt from the provisions of Sections _____ (residential) _____ (commercial) _____ (public property) between the hours of 8 a.m. and 8 p.m.
- b. Safety devices. Aural warning devices which are required by law to protect the health, safety and welfare of the community shall not produce a noise level more than 5 dBA above the standard or minimum level stipulated by law.
- c. Emergencies. Emergencies are exempt from this chapter.
- d. Construction. Notwithstanding any other provision of this chapter, between the hours of 8 a.m. and 8 p.m., construction, alteration or repair activities which are authorized by a valid City Permit shall be allowed if they meet at least one of the following noise limitations:
 - (1) No individual piece of equipment shall produce a noise level exceeding 83 dBA at a distance of 25 feet. If the device is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close to 25 feet from the equipment as possible.
 - (2) The noise level at any point outside of the property plane of the project shall not exceed 86 dBA.

Section _____ General Noise Regulations

Notwithstanding any other provisions of this chapter, and in addition thereto, it shall be unlawful for any person to willfully make to continue, or cause to be made or continued, any loud, unnecessary or unusual noise which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area. The standards which shall be considered in determining whether a violation of the provisions of this section exists shall include, but not be limited to, the following:

- a. The level of the noise.
- b. The intensity of the noise;
- c. Whether the nature of the noise is usual or unusual;
- d. Whether the origin of the noise is natural or unnatural;
- e. The level and intensity of the background noise;
- f. The proximity of the noise to residential sleeping facilities;

- g. The nature and zoning of the area within which the noise emanates;
- h. The time of day or night the noise occurs;
- i. The duration of the noise;
- j. Whether the noise is reccurrent, intermittent, or constant; and
- k. Whether the noise is produced by a commercial or noncommercial activity.

Section _____ Exception Permits

If the applicant can show to the City Administrator or his designee, that a diligent investigation of available noise abatement techniques indicates that immediate compliance with the requirements of this chapter would be impractical or unreasonable, a permit to allow exception from the provisions contained in all or a portion of this chapter may be issued, with appropriate conditions to minimize the public detriment caused by such exceptions. Any such permit shall be of as short duration as possible, and shall be conditioned by a schedule for compliance and details of methods therefore in appropriate cases. Any person aggrieved with the decision of the City Administrator or his designee, may appeal to the City Council pursuant to Section _____ of this code.

APPENDIX V

OUTLINE FOR CITY EMERGENCY PLAN*

Distribution List

Record of Changes

I. Planning Basis

A. Authorities and References

B. Purpose

C. Activation of Emergency Plan

D. Planning Factors

1. General

a. Description of Jurisdiction

b. The Civil Defense System

c. Standardization of Plans

d. Emergency Requirements

e. City-County Coordination

f. Private Resources

2. Supporting Organizations of Mutual Aid

a. Support to and by the City

b. Special Districts

c. American National Red Cross

d. Business and Industry

e. Military Support

f. Mutual Aid

g. Operational Area

* Source: State of California Office of Emergency Services, May, 1972.

3. Continuity of Government

E. Assumptions - War Emergency

F. Assumptions - Major Peacetime Emergency

II. Objectives

III. General Plan

A. Operational Concepts - Major Peacetime Emergencies

1. General

2. Basic Emergency Situations

3. Warning

B. Operations Schedule - Major Peacetime Emergencies

1. Pre-emergency

2. Emergency

3. Post-emergency

C. Operational Concepts - War Emergency

1. General

2. Warning Conditions

3. Readiness Conditions

4. Operational Considerations

D. Operations Schedules - War Emergency

1. Increased Readiness
2. Warning Schedule
3. Remedial Operations
4. Undamaged Area Schedule
5. Undamaged Fallout Area Schedule
6. Fire Area Schedule
7. Recovery Schedule

IV. Organization

A. Manpower

1. General
2. Disaster Service Workers

B. Organizational Structure

C. The Emergency Organization

D. Staff Sections

1. Direction and Control
2. Situation Intelligence
3. Radiological Defense
4. Communications
5. Warning
6. Emergency Public Information
7. Procurement

E. Emergency Services

1. Welfare/Shelter
2. Medical Care
3. Law Enforcement
4. Traffic Control
5. Engineering
6. Fire

F. Emergency Resources Management Divisions

1. Construction
2. Housing
3. Economic Stabilization
4. Food
5. Health
6. Industrial Production
7. Manpower
8. Petroleum
9. Transportation
10. Utilities
11. Telecommunications

G. Organizational Chart

H. Interjurisdiction Line of Authority Chart

V. Task Assignments

- A. General Assignments of Responsibility
- B. Specific Assignments of Responsibility
 - 1. City Council
 - 2. Disaster Council
 - 3. Director of Civil Defense/Emergency Services
 - 4. Staff Sections
 - 5. Emergency Services
 - 6. Emergency Resources Management Divisions

VI. Attachments

- A. Continuity of Government
- B. Basic Actions for Increased Readiness
- C. Warning System
- D. Communications Systems
- E. Emergency Broadcast System (EBS)
- F. Emergency Operating Centers (EOC)
- G. Fallout Shelter System - War Emergency

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